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Virginia Medical Monthly

Official Publication of the Medical Society of Virginia

WHOLE No. 989.
Vol. 61, No. 8.

RICHMOND, VA., NOVEMBER, 1934

$2.00 A YEAR
25 CENTS A COPY

MEDICINE AN ART AND A SCIENCE.*

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Some one has said "Medicine is as old as the human race, as old as the necessity for removing disease." The medical man of the primtive day was the child of necessity. He relied entirely on his art which was based to a great extent on superstition and fallacy. There was no science; most of the good he accomplished was due to the faith with which he inspired his patients and, of course, to the strong medicine of nature. Nevertheless, his ministrations were seemingly helpful and he was credited with performing cures and even perhaps saving life. All the ancient civilizations contributed to and developed systems of medicine but, until the time of Hippocrates, medicine was in no sense a science. With Hippocrates the study of disease really began, and its separation from mysticism and religion were in some degree attained.

All the sciences have contributed their share to the development of medicine, and close observation of nature's laws as to health and disease, along with development of the basic sciences, have been the stepping stones upon which medicine as a science has been slowly built. Man is a complex creature, of a derivation both animal and psychic, with an inordinate thirst for knowledge. This desire for seeking after the unknown has brought man to his present state of mental development, yet there is much to learn and probably to forget also.

The physicians from Hippocrates down to the past century developed medicine more as an art than as a science; however, for the past hundred years the science has made rapid strides and at present has outstripped the art. Art may be defined as the skill and facility with which knowledge is applied to get results. Science is systematized knowledge which is demonstrable of proof. Science is the foundation stone of modern medicine and is as essential to the success of the modern practitioner as is heat and light to growth. The study of medicine is the study of a science, but its application to the treatment of the sick is an art, but an art which should be based on scientific knowledge. Art is just as essential a factor in treating the patient as are science and time in treating his disease. The science of medicine may be learned from books and in the laboratory, but the art of successful practice is not so learned. With some it seems to be to some extent a gift, but may be acquired by cultivation and experience and by association with those who possess it. It is apparently acquired more readily by those who are capable of inspiring their patients with hope. A man of mediocre scientific ability will sometimes outstrip one of far more scientific attainment by more skilfully applying what he knows, than does his more scientific competitor. There is need for cultivating the art as well as the science at the present time, if one expects to minister to the individual sick. It may do for those who expect to devote themselves to the laboratory to cultivate the science and neglect the art, but not so with those whose lives will be devoted to practice. The most successful physician will be the one who lays a good foundation based on scientific knowledge, and then acquires the art of skilfully applying that knowledge.

It appears that the methods of administering medical practice may be about to change, but it seems hard to believe other than that, for the average American family, the well-trained family physician will be the most acceptable method of receiving medical treatment, with the capable specialist and the well-equipped hospital for special treatment.

*Address of the President before the Sixty-fifth Annual Session of the Medical Society of Virginia, at Alexandria, October 9-11, 1934.

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There are many physicians whose success would be far greater if they cultivated both the science and art of medicine as well. At this time there are many opportunities for those who have been in practice for a number of years to acquire the worthwhile advances that science has developed. With this knowledge of the present added to the experience of the past, a man who has been in practice has a powerful advantage. To the recent graduate, in whose mind the teachings of science are fresh, is given the opportunity of applying his knowledge by experience and good judgment. Thus youth and age both have their advantages. The medical man of the future will be the product of environmental changes, with the same general characteristics, it is to be hoped. He should be more competent because he will have more scientific ability, due to increased knowledge. If he intelligently uses this knowledge, he will be better able to care for those who are sick and, what is far better, to keep those who are well from getting sick. The span of life has already been lengthened greatly, owing to the increased longevity of those who formerly died in childhood from preventable disease, and those in adult life who died from infectious disease. Science has worked wonders here, but the death toll from arteriosclerosis with its degenerative sequelae and from malignant disease still challenge science and baffle the skill of the wisest, and will probably continue to do so. It may be cited that, owing to the fact science has taught how the life span of the race may be lengthened by means of its wonderful accomplishments in the fields of curative and preventive medicine, the lives of the mental and moral degenerate as well as the physical weakling are thus preserved to adult life, thereby tainting the heredity of the race and offsetting much of the good of environmental influences. It appears, therefore, that the study of scientific measures to correct this evil are necessary. This seems indicated when we consider the pernicious influence of a bad heredity on the future of the race. It does seem that further study of the science of eugenics, with a view of educating the public along this line, as well as some statutory application of this principle to the laws pertaining to marriage might help. At present the only measures of this type which are being carried out in this State are institutional in character. The law of the survival of the fittest has been nature's way of preserving racial integrity in the past, and, if science has in a way circumvented nature, it seems that science should at least endeavor to find some way, compatible with reason and justice, to prevent this condition—to some extent at least.

It may not be amiss to mention some of the epoch making advances made in scientific medicine and the names of those who have been instrumental in making these advances. Hippocrates stands out as the first great scientist. This man developed both the art and the science of medicine. He was a scientist because he divorced medicine from mysticism and religion and interpreted his observations by the rule of reason. He developed the art of bedside study of disease and was the first great clinician, and therefore deserves the name of the father of medicine. The veneration in which he held his profession and those who practiced it, as well as the consideration with which he regarded his patients, show the integrity of his character.

From the time of Hippocrates, medicine did not show any marked advances for many centuries. Galen, who lived in the second century A. D., was a great physician and was much sought after. He was a great writer on medical subjects and a great theorist. His teachings dominated medicine for more than a thousand years, and during that time no marked scientific advances were made. The success of Galen was doubtless due to his superior art and not to any great ability as a scientist. Later, many of his theories were found to be based on fallacy. Up to the period of the Renaissance medicine made no great advances. Paracelsus, who was born about 1490, was the first who was brave enough to break loose from the traditional fallacies of Galen and initiated a period of independent thought. He also introduced a number of useful chemicals into medical usage.

Vesalius, born in the sixteenth century, laid the foundation of anatomy as a science, and thereby deserves the place of one of the great lights in medicine.

Ambrose Pare, the French surgeon, who was the greatest surgeon of his period or of any period up to his day, completed the list of three, who did more up to that time to develop medicine as a science than any others had done since Hippocrates. Ambrose Pare acquired distinction by discarding the use of boiling oil in the treatment of gunshot wounds, and he also developed the operation of amputation by using the ligature to control hemorrhage. Before

his time, searing with a hot iron was the only means used for this purpose. He is also said to have been the first to use podalic version.

William Harvey, born in England about 1578, discovered the true method of the circulation of the blood, and thus founded the science of physiology. He also cleared up the physiology of the respiration. From this time on, medicine as a science developed more rapidly.

Sydenham, born in England in 1620, was called the English Hippocrates and was one of the great clinicians. He described many important diseases, and the disease, chorea, is still called Sydenham's chorea.

John Hunter, born in 1728, also an Englishman, was a great anatomist and made epochal developments in the realm of the surgery of blood vessels. He was one of the greatest investigators in the domain of physiology and pathology and the greatest surgeon up to his day.

The discovery of vaccination against smallpox by Edward Jenner, who lived about the time of Hunter, has probably done more for humanity by controlling this scourge, than any one thing done by one man in the history of medicine. Jenner not only worked out a successful plan to prevent this disease, which is the worse epidemic disease that ever invaded the colder climates, but his discovery paved the way for the development of the modern science of immunology.

The discovery that puerperal fever was contagious by Holmes in America and by Semmelweiss, of Vienna, and the protection of puerperal women by isolation and cleanliness, were great discoveries, but even modern asepsis and antisepsis seem unable to reduce the incidence of this disease as low as it should be, according to statistics.

Discovery of the anesthetics, ether and chloroform, the former by Long and Morton, Americans, the latter by Sir James Simpson, a Scotchman, along with the discovery of antisepsis by Lord Lister, have made possible the accomplishments of modern surgery.

Invention of the stethoscope by Laennec, a Frenchman, has probably contributed as much as any one thing to making diagnosis a science, and up to the discovery of the Roentgen ray, this was the greatest single aid to diagnosis of diseases of the chest.

Louis Pasteur and Robert Koch practically founded the modern science of bacteriology. Pasteur, a Frenchman, was not a physician, but a great scientist. He developed the inoculation method of treating those who had been bitten by animals infected with rabies, thereby preventing this terrible disease. Robert Koch, a German, was famed for his work on anthrax; then he discovered the tubercle bacillus; afterwards the spirillum of Asiatic cholera. Besides these, he discovered a number of the organisms responsible for wound infection. Koch was probably the greatest bacteriologist of all time.

In the year 1895, Wilhelm Konrad Von Roentgen discovered the ray which bears his name. From the standpoint of surgery as well as internal medicine, this has been of greatest value, inasmuch as in many conditions it has reduced diagnosis to a certainty. The application of this discovery to the problems of diagnosis, as well as its therapeutic value, has certainly been one of the greatest discoveries of modern times.

In 1905, Schaudinn, a Prussian, discovered the bacterial cause of syphilis. This was soon followed by Ehrlich's work in bio-chemistry, which resulted in the making of salvarsan, which is certainly a near specific for syphilis.

The discovery of the specific cause of diphtheria by Klebs and Löffler, and of the specific antitoxin by Behring, with the later development of toxin-antitoxin and toxoid, have practically given science control of this scourge of childhood. The isolation of the typhoid bacillus by Eberth, along with Widal's agglutination test and vaccination against this disease, together with modern sanitation, have materially controlled this almost universal infection.

The work of Walter Reed and his commission, along with the work of General Gorgas, has enabled the tropics and subtropics to banish the deadly menace of yellow fever.

It would not do to close this list of epoch-making achievements in scientific medicine without mentioning the discovery of insulin by Banting and Best. This is the most valuable of the contributions of organo-therapy to medicine, as it has given science a large degree of mastery over diabetes, a disease which before this was amenable to dietary control—and that only to a limited extent.

There are many other scientific achievements of almost or quite as much importance as those mentioned, and many great clinicians and scientists whose names are written high in the annals of medi-

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cal history, but, on account of time, these cannot be mentioned here.

Now we come to the part that has been played by those of less transcendent genius, but nevertheless of almost as much importance, those who have made use of the great discoveries of science and have applied them to the prevention and cure of disease. In this class are the many physicians and surgeons who, through the ages, have used the art of medicine in applying the teachings of science in an effort to relieve human suffering, often risking their lives on the battle-field, in tenement houses of large cities, in the lonely hamlets of the countryside, in the hospitals and, in fact, wherever suffering and death have been known. To these, the unknown votaries of the healing art, should honor also be given. These, too, have done their part to unite the art and science of medicine and to weld them into a learned profession, whose proud heritage has been not only to succor and help the sick, but to protect the human race in time of peril and war from epidemics of disease and wounds and, when stricken, to help kindly nature heal when such is possible. In time of deadly peril, next to the Deity, the human race calls more on the medical profession for help than any other. From the first feeble wail of the helpless infant to the end of life, the doctor is called on for help and comfort. May the profession continue in its mission of applying science with the skill of art!

It is true that the ideals of society are changing, and in the process of evolution customs must necessarily change, but the same great impulses and passions sway the minds of human beings that have swayed them for centuries. The current of these superficial things does not, however, run deep in the minds of human beings as do the fundamental things on which life and society depend. So, let us hope that, however much we may change our surface markings and by what ever name we may call them, the profession of medicine may adhere, in principle at least, to the high ideals of that old Greek who was called the father of medicine and who formulated the highest code of ethics ever recorded, for which the profession of medicine should strive.

I close with this, the fervent wish of my heart, that the medical profession, with its high measure of achievement and accomplishment, paid for by thousands of lives devoted to study and effort and by grand and noble work done for humanity, may band together as one man for the good of the race and the honor of a noble profession, and may not sell its birthright for a mess of pottage.

SOME ARTERIAL DISORDERS OF THE BRAIN COMPLICATING GENERAL MEDICAL DISEASES.*

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It is quite apparent that there is an intimate relationship between general medicine and disorders of the brain. This relationship is but the more emphasized as the advances of modern medicine unfold new findings in anatomy and physiology of the brain and the general body. Recent findings of neurologists and psychiatrists further draw attention to the relationship. In epilepsy[1] with its new therapy in diet and fluids, dementia paralytica with its treatment by induced fever, malaria or diathermy, and in endocrine disorders with its adjustment through internal medication of gland-feeding or injections, general medicine plays no insignificant part. Besides, in the mental disturbances that follow in the train of pneumonia, influenza, pregnancy, typhoid fever, acute cardiac disorders, anemias, food deficiency diseases, alcohol and drug-degenerations, and the like, etiologic explanations are found often in the general system. The therapeutic management of such mental disturbances is largely in the general medical treatment. Between the disorders of the arteries of the brain, particularly, and certain general diseases, one is quite able to affirm that there

*Read before the Stuart Circle Hospital Clinical Club, March, 1934.

exists a direct relationship. It is the purpose of this paper to draw attention to this relationship by sketching here some facts about the brain and its circulatory structures, and by describing several well-known and common general maladies that make serious inroads upon these blood vessels and, in consequence, create, in a general medical disease picture, striking, spectacular, and often mortal brain symptoms.

One must say, then, that the brain is necessarily an organ of first importance in general medicine. In spite of the fact that in recent years the brain has not received at the hands of internists, general physicians and general practitioners, the attention it deserves, it cannot be removed from a foremost place in the practice of internists and general practitioners as long as arteriosclerosis, nephritis, diabetes, syphilis, cardiac and such diseases so widely exist in the disease-population of the land.

The brain lies in the skull and weighs an average of forty-eight ounces in the male and forty-three and one-half ounces in the female. In its grand divisions of cerebrum, cerebellum and medulla oblongata, it lies there enveloped in its membranes. The cerebrum claims chief attention in this connection. It is the largest division of encephalon. It is ovoid and divided into hemispheres with a deep cleft or sylvian fissure in each side. The whole surface is divided into convolutions and fissures, demarking a frontal lobe, parietal lobe, occipital lobe, the temporo-sphenoidal lobe, and the various subdivisions in each. A continuous sheet of special gray matter envelops the white mass beneath and folds itself snugly in fissures and convolutions thereon. This is the cortex. Here is generated the high functions of the brain. Below is the white structure with its tracts, its corpus callosum, its caudate nucleus, its thalamus, its ventricles, its blood vessels, its cranial nerve-origins, and other structures.

The brain receives, through foramen in the skull, the blood vessels which bring the essential blood in order to supply adequate oxygenation to nerve cells of the central nervous system. A lack of oxygen quickly injures brain cells. On the floor of the skull the double origin of a continuous arterial system of the brain lies. The two vertebrals and the two internal carotids are practically, says Jackson, the anatomist, a common supply for all the arteries of the encephalon. That uique anastomosis at the base of the brain, known as the Circle of Willis, is brought about by interjunction of these four arteries. Jackson describes this blood supply of the brain succinctly: "The terminal or internal branches of the surface plexus derived from the posterior, middle and anterior cerebral arteries, are arranged into two groups: a ganglionic (nuclear) and a cortical group."

A. The ganglionic branches form four groups in each hemisphere. (1) Anteromedial group, from the anterior cerebral artery, supplies the head of the caudate nucleus, the septum pellucidum, the columns of the fornix and the lamina terminalis. (2) Anterolateral group, from the middle cerebral artery, pierces the anterior perforated substance in two sub-groups: (a) internal striate arteries, giving branches to globus pallidus of the lenticular nucleus and through the internal capsule terminate in caudate nucleus and thalamus; (b) external striate arteries, larger and more numerous, pass upward, between the external capsule and the putamen, and then through and around the upper part of the putamen into the internal capsule where they form two groups, the lenticulothalamic and the lenticulocaudate groups. The former terminates in the thalamus and the latter in caudate nucleus. On account of its larger size at its origin and its direct linear continuation with the internal carotid, emboli pass more frequently into the middle cerebral artery than into the anterior cerebral artery. One of the lenticulo-caudate arteries, which is longer and larger than the other and which is a direct branch from the middle cerebral artery, is called the "artery of cerebral hemorrhage" (Charcot). (3) Posteromedial group, from the posterior cerebral artery, supplies the floor of the third ventricle, the posterior part of the thalamus and the hypothalamic region. (4) Posterolateral group, from the central branches of the posterior cerebral artery, supplies the posterior part of the internal capsule, the pulvinar of the thalamus, the geniculate bodies, the corpora quadrigemina and their branchia, the pineal body and the cerebral peduncles.

B. The cortical group of the cerebral arteries passes into the cortical substance both from the summits of the gyri and from the walls of the sulci. They are short and pass at right angles into the gyri, and supply gray matter and white substance

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beneath, penetrating the medullary portion of the brain. Such is an anatomical resumé of the general lay-out of blood vessels in the cerebrum.[2] Circulation in the other members of the encephalon is omitted, as not germane to this discussion.

If the general practitioner looks at a diagram of the brain for the main areas in the motor field, he notes that high in sulcus centralis of the cortex is found that of the leg (toes, ankle, knee and hip); next below, the body (shoulder, elbow, wrist, fingers and thumb); next below, neck, face, tongue and mouth (ear, eyelid, nose, closure of jaw, opening of jaw, vocal cords, mastication). There also is the visual region and the auditory region of the cortex, and the olfactory region of the cortex; each offers functions of extreme interest in general medicine. The sensory area lies in the cortex and must be studied through sensations of heat, cold, pain, skin touch, position, sight and smell. These serve as important aids in diagnosis of brain maladies as they appear in the sensory tract and cortex.

The intellect or mind is housed somewhere in the gray cells of the fore brain. Here resides consciousness; from here springs disordered thought or psychoses. It is here that man thinks and reasons or becomes mad; it is here that man fears, hates, loves, imagines, remembers, judges, aspires, defends, contrives, invents, gives honor and suffers dishonor, feels despondency, endures hardship, suffers humiliation. In other words, here in brain cells, exists man—and all that mankind stands for.

May we not say with Pope* of this mind-area of the brain, what he says of man in his "Essay on Man"!

"Know then thyself, presume not God to scan;
The proper study of mankind is man.
Placed on this isthmus of a middle state,
A being darkly wise, and rudely great:
With too much knowledge for the skeptic side,
With two much weakness for the stoic's pride,
He hangs between; in doubt to act, or rest;
In doubt to deem himself a God or beast;
In doubt his mind or body to prefer;
Born but to die, and reas'ning but to err;
Alike in ignorance, his reason such,
Whether he thinks too little or too much;
Chaos of thought and passion, all confused;
Still by himself abused, or disabused;
Created half to rise, and half to fall;
Great lord of all things, yet a prey to all;
Sole judge of truth, in endless error hurled,
The glory, jest, and riddle of the world."

*Pope: "Essay on Man."

Recent studies on the cerebral blood vessels have brought out interesting facts. For a long time it was held that vessels of the brain were end-arteries; much like the theory that the so-called end-arteries of the coronary system were lacking in anastomosis. But the work of Pfeifer and Cobb, cited by Sands,[3] shows that capillary blood supply of the cortex is an endless network and that there is a free anastomosis between the capillaries of both the surface and the depth of the brain. Sands further calls attention to Hassin's work in which the presence of nerve endings in the pial vessels was demonstrated, and to the work of Penfield in which the same sort of innervation of the intra-cerebral arteries was found. Besides it was noted that the two nerve plexuses are continuous. Sands further notes that Forbes and Wolf have "demonstrated that the nerve supply of the vessels of the brain is derived from the sympathetic system, and that stimulation of the vagus causes dilatation of the vessels, and stimulation of the sympathetic causes their constriction."

The lymphatic system of the brain also has a bearing on the physiology of the circulation. It has been found, but not without question by some, that there is the presence of the Virchow-Robin lymph spaces in the adventitial sheaths of the cerebral arteries. It is felt that this lymph system, under stress and strain of modern life and prolonged and arduous intellectual effort, carries a high content of brain effete-material and that irritation, constriction and even pathological effects are produced by this in the walls of these vessels and leads to degenerative and sclerotic changes.

Cerebro-spinal fluid[4] needs some comment and consideration in this connection, because it originates in the highly vascular choroid plexus. This fluid lies in lateral ventricles of the brain. This brain fluid, formed by this vascular structure, passes from the ventricles by way of the Sylvian aqueduct through the mid-brain to the fourth ventricle; then passes through a small aperture in the pia mater, which covers the fourth ventricle and reaches the cerebral cavity. The fluid passes through the thin membrane which separates the subarachnoid space from the venous sinuses and there enters the blood stream. If, perchance, the arachnoid villi become blocked and the choroid plexus becomes enlarged, intracranial pressure results.

The outlet of the spinal route of the fluid is

through the foramina of Magendie and Luschka. One may see the remote influence of sclerosis of the cerebral vessels here—more direct under the effect of blood clot in brain hemorrhage.

Cobb[5] has recently called attention to some interesting physiologic facts of the cerebral spinal fluid that seem worth noting here. This water jacket over and in the brain is subject to great and frequent changes of pressure under more or less normal conditions: in the prone position, the normal is about 150 mm. of water; in a sitting position, the pressure within the cerebral ventricles falls to minus 30 or 40 mm. of water, while in the lumbar sac it is 300 or 400, depending upon the length of cranio-vertebral canal. It is true, also, that intracranial venous pressure is practically always the same as the cerebro-spinal fluid pressure—rising and falling with it. One sees at once that, with this changing venous blood pressure, arterial capillary flow must pour in compensating amounts of oxygenated blood. Such varying demands, as controlled by the flexibility of the caliber of arterioles and a sustained head of pressure from the arteries is obtained through the conjoined network of the "Circle of Willis."

To repeat, cerebral vascular disease and disorders necessarily occupy a foremost place in general diseases. The function of the brain-centers depends upon the blood supply. Arterial degeneration and sclerosis is, we know, a common condition. In every walk of life and in the 5th to 7th decade arterial disease is to be found. Practitioners see on every hand in patients of this period of life the plain evidence of arterial disease. Sclerosis of the brain vessels is probably likely to produce symptoms of danger both to life and usefulness; sclerotic changes of the vessels of the heart in its coronary symptoms may be comparable to those of the brain in degree of danger to and usefulness of human life.

Cerebral arteriosclerosis may or may not participate fully with palpable or general arteriosclerosis. But the same general causes are known to be factors in both the general and cerebral arterial sclerosis. Factors outside of the brain produce the gradual sclerosis more often by far than not; factors in daily habits in food and drink, occurrence of infections far removed from the brain, disease of the kidneys, chronic diseases, such as diabetes, form a group of conditions that serve as etiologic factors in the production of cerebral arterial disease. These conditions may operate for years before symptoms of importance are ordinarily detectable in the brain. In the process of sclerosis large arteries chiefly may be involved; there may, however, be cases in which the small arteries predominate in the sclerotic change.

Symptomatic evidences of such changes in the brain are varied. Generally such patients complain of one or a group of the following symptoms: headache, queer feelings in the head, dizziness, nausea and vomiting, ringing in the ears, fullness in the head, a lack of power of concentration, visual disturbance, irritability, sleeplessness, despondency, unsteadiness of station and tremor, emotional unbalance, mental confusion, speech disorders and incomplete mental deterioration, and symptoms secondary to progressive vascular subcortical encephalitis. Cerebral hemorrhage or apoplexy may spectacularly occur. In such an evolutionary sclerotic change, and under the influence of high blood pressure, often a cerebral artery ruptures and hemorrhages. Such a hemorrhage may occur anywhere—in the cerebrum, pons, medulla, or cerebellum. But, most commonly, cerebral hemorrhage occurs. The blood, perchance, floods the lenticular nucleus and leaks its way into the internal capsule, and afterwards bursts in the cerebral ventricle. The classic Charcot's "artery of cerebral hemorrhage," the lenticulostriate artery, is at fault in 90 per cent of these cases.

The focal symptoms vary very much according to the location and quantity of blood and the compensating factors present at the time of and following the cerebral arterial rupture.

Rapid loss of consciousness may characterize the shock of hemorrhage. Coma, for a few hours, days or weeks, may follow. If the hemorrhage is of large proportions and if bleeding occurs into the ventricle, symptoms of intracranial pressure, such as disordered respiration, even Cheyne-Stokes' breathing, and increase of blood pressure, appear. Most common are the symptoms of hemiplegia; sometimes hemiplegia comes on at the time of hemorrhage or a short time thereafter, but in some circumstances of location and amount of bleeding this symptom may be delayed in appearing for some hours. Besides paralysis, temporary sensory disturbances, trophic changes, contractures, and aphasia (in right-

sided hemiplegia) may be noted. The points in connection with general disease and cerebral hemorrhage may be illustrated by a few cases:

Case One.—Mrs. G. (10697). Now living at the age of 81 years. A white woman, first seen 1915, diagnosed then as over-weight, chronic nephritis, high blood pressure (185 systolic). In 1925 had a cerebral hemorrhage; was unconscious for three weeks, more or less complete. Paralysis of left side. Gradual restoration of motor function was obtained.

Case Two.—Mrs. T. (10138). Now living at the age of 73 years A white woman, widowed. First records 1914. Diagnosed chronic nephritis (mild), without marked symptoms. Had an attack of hepatic colic (1914). Weight 126. Blood pressure 168 systolic; 1924 cerebral hemorrhage occurred; was able to walk from toilet room to bed: lapsed into unconsciousness, and remained more or less in this state for two weeks; paralysis of right arm and leg and aphasia. Now, after nine years, partial use of leg, arm and speech, result.

Case Three.—Mrs. D. (14625). Now living at age of 80 years. A white woman, first seen 1922, giving history of having had a slight stroke. Weight 185; systolic blood pressure 185; heart enlarged. Diagnosed overweight, arteriosclerosis, chronic nephritis, myocarditis. 1931 cerebral hemorrhage occurred; unconscious for three weeks. Paralysis of left side; gradual restoration of motor function. Present condition good, but on account of overweight restricted in movements.

Case Four.—Mr. W. (12594). Now living at age of 78 years. A white man, first record of blood pressure 200 systolic. Diagnosed; arteriosclerosis; marked vertigo with blood pressure 220 and 230 were noted. December, 1932, had cerebral hemorrhage; unconscious for some weeks. Paralysis of left side; gradual improvement; August, 1933, had second cerebral hemorrhage with unconsciousness and left hemiplegia. Now under care of nurse.

Case Five.—Mrs. W. (12541). Died August, 1933, at age of 70 years. A white woman, school teacher, first seen 1918; had blood pressure 180 systolic. Diagnosed arteriosclerosis, myocarditis. Weight 146. April and June, 1933, had cerebral hemorrhage; paralysis on left side, with stupor, coma, and death.

Case Six.—Mr. R. (16431). Died November, 1932. A white man, 72 years, guard at penitentiary, first seen November, 1930, on account of cholecystitis with pain and obstinate jaundice. Blood pressure was 180 systolic, and patient had an associated diabetes mellitus. Gall-bladder and diabetes were treated. Cerebral hemorrhage occurred November, 1932; in coma for twelve days before the end; left hemiplegia. This patient stated he felt a pain in right side of his head and got up from a chair and found that he could not use his left side and fell. He had experienced dizziness and ringing in ears many times.

Case Seven.—Mrs. K. (16701) S. C. H. Died April 23, 1933. A white woman aged 54 years. Seen in consultation with Dr. M. L. Anderson. Patient unconscious; blood pressure 260 systolic. Paralysis on right side. Blood-sugar records while in hospital 203, 362, 376 and 448, whereas in early part of hospitalization it was only 141. Diagnosis: Diabetes, chronic nephritis, arteriosclerosis, and hemorrhage of cerebral artery.

Cerebral thrombosis is a lesion not uncommon partictularly in cases of diabetes and syphilis. It may occur in cerebral embolism following some mild or severe systemic infection or chronic disease. Prodromal symptoms of this vascular lesion usually appear gradually, except in the instances of embolism. Common symptoms are headache, dizziness, numbness, tingling, muscular weakness, partial anesthesia, slowly growing more pronounced as occlusion becomes more complete in the cerebral vessel. Sensory disturbance may take precedence over the motor. Slow and progressive, the symptoms become more and more marked. The localization of the lesion in a spreading thrombosis of a large area makes interpretations difficult. The diagnosis between thrombosis and an infiltrating neoplasm taxes the best skill of neurologists. Special notice must be made of the two associated diseases to this condition. In cerebral syphilis evidence of thrombosis of vessels must be thought of: gradually effecting a paralysis, and dementia symptoms. In diabetes mellitus, with its long years of high blood sugar and its arteriosclerotic change, likewise, one must be not unmindful of a possible cerebral arterial thrombosis. This may appear in the form of indefinite sensory symptoms, such as numbness or pain, and later followed by motor and other cerebral

symptoms. Illustrative cases of thrombosis may be found in the history of two patients:

Case Eight.—Mrs. S. (15488). Died December 10, 1930. A white woman aged 63 years, weight 171; height 5 feet, 5 inches. Had consulted me at intervals during a period of four years. Blood pressure readings had been never excessive, but she showed the evidence of "full habit" and was a very nervous type. There was no evidence of gross arteriosclerosis; but there was discernible a marked "personality" of the strenuous type. On September 28, 1930, was called to her home in the country. Ten days before she had a sensation of numbness in the left hand, a sort of prickly feeling; also a like feeling in the left side of her face. Blood pressure was 160/105. There was no impairment of sensation in the lower extremities at this time, but in a few days numbness in left lower limb was felt. No motor signs had appeared.

On October 13, 1930, motor disturbance of left side of face and left hand was noted, growing progressively worse to complete left hemiplegia. This patient gradually grew worse, passing into a stupor, more or less deep, and finally into coma. Death occurred about eighty-four days after first feeling of numbness in the hand. Diagnostic vote by two interists and three neurologists was in favor of vascular thrombosis over brain tumor, although brain tumor was ever foremost in the minds of medical attendants. It was probably progressive thrombosis of a branch of the middle cerebral with cortical deterioration.

Case Nine.—Mr. B. (15666). A white man, aged 63 years. When first seen September, 1926, he weighed 162 pounds, blood pressure was 140/80, with sugar in the urine, and blood sugar 190 mgs. per 100 c.c. of blood. Died April 25, 1931. This patient was more or less continuously under observation for five years; while he obeyed dietary orders fairly well, he continued the use of a large daily amount of whisky. He was under constant treatment of insulin and diet. Late in March, 1931, gradual loss of motor function of right side of face and right arm was noted; besides impairment of speech, periods of stupor more or less deep were present. Blood sugar was 102 on admission to the hospital; blood sugar became 214 and shortly before his death was 444, and urea was 110. Diagnosis of diabetes, arteriosclerosis and chronic nephritis culminating in thrombosis of cerebral artery was made.

Cerebral embolus is a lesion of the cerebral "circulation," more or less frequently met with in medical practice. Doubtless quite a number of such cases come to mind as one reflects upon years of practice. Recalling the anatomical map of the cerebral circulation, one may understand the possible variableness of symptoms arising from such a lesion. Sudden occlusion of a vessel by a fragment from a distant area gives rise to dramatic symptoms. It may be a vegetation from an ulcerative heart valve or cardiac infarction following coronary thrombosis. One of the most striking causes is subacute bacterial endocarditis; in the course of this protracted malady one may experience paralysis, convulsions, attacks of unconsciousness, and death, following in the train of a cerebral embolus. Often emboli are small, usually so, and block small arteries; the damage may consequently be small, and there may be merely a monoplegia. However, there may be hemiplegia. There may be unconsciousness. Much of the damage of survivors is brought about by edema, incident to the blockage. As the edema of a region recedes, the symptoms may improve. Thrombosis may follow, however, in the distal branches and permanent and deteriorative damage ensue. Often the sensory signs are as marked as the motor. This is due to the fact that emboli, and the occlusive effect therefrom, effect the thalamus where sensory areas are found.

This clinical condition may be illustrated by the following case:

Case Ten.—Mr. W. (16098). Died January, 1929. A white man of 58 years, a lawyer. He had taken an active part in speaking campaign of Al Smith for President in the Fall of 1928. Suffered attack of coronary thrombosis, with anginal syndrome; and remained in hospital for several weeks. Blood pressure 148/82. Was transferred to his home by ambulance; remained at home for one week when suddenly had symptoms of loss of speech, numbness and loss of motion in right arm. Was transferred to hospital. Symptoms cleared up, and returned home in four weeks in ambulance. Recurrence of symptoms of embolic phenomena occurred in both legs and right arm; these were local to extremities. Diagnosis was cornary thrombosis,

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infarction and embolic symptoms in cerebral arteries and arteries of extremities.

While aneurysm and hemorrhage from traumatism may rightfully be considered in connection with the subject under discussion, the purpose of the paper precludes going into these lesions. Likewise, venous hemorrhage with thrombosis may present lesions to be appropriately discussed, but as these enter frequently in the domain of trauma and infection they may be omitted here.

In conclusion, one may call attention, then, to the strategic clinical position of the practitioner as he observes the progress of such ambulatory patients. The physician may properly read into medical prognosis, in his own mind, in cases of high blood pressure and arteriosclerosis, in diabetes with arterial sclerosis, in nephritis, in syphilis and other conditions above mentioned, the rather great possibilities of cerebral arterial disease or disorders as ultimate and, often, terminal phenomena. With such a mental projection as a possible trend, one may feel that the medical mind does occupy a better clinical attitude that would, at least, forefend or delay the occurrence of such vascular eventualities.

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THE TREATMENT OF THE COMMON TYPES OF CHRONIC ARTHRITIS.

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The history of chronic arthritis goes as far back into remote epochs as that of any other disease. It has long been, and still is, with the exception of cardiovascular conditions, the chief cause of disability among chronic diseases. Nevertheless, up until two decades ago arthritis was a sort of stepchild of medicine. Few were interested in its study. It was not a topic for discussion at medical meetings and no one rejoiced in the opportunity of treating its victims. This attitude is illustrated by the statement attributed to Dr. Osler when he was asked how best to handle a case with chronic arthritis. He is said to have replied "when you see a chronic arthritic come in at the front door, climb the back fence."

A marked change, however, has occurred in the status of arthritis during the past twenty-five years. In part, this may have been due to the promulgation and development of the doctrine of focal infections, and, in part, to the development of community health studies and state medicine in European countries where our colleagues of the medical profession were not enthusiastic about the focal infections. Now in Europe there is an International League against Rheumatism with divisional sections in each country. The Congress sponsored by this League meets yearly in some important medical center. The British Medical Association appointed a committee to study the causation and treatment of arthritis and allied conditions. This committee made a full report of their studies, which was published in the *British Medical Journal*, June 17, 1933. There is also the American Committee for the Control of Rheumatism. This committee is now affiliated with the American Medical Association and holds its meetings in conjunction with the yearly meeting of the Association. Entirely apart from the work of these official bodies, medical literature is today full of articles discussing the pros and cons of numerous features in the etiology, pathogenesis, and the treatment of chronic arthritis, for, we must admit, we are really still in the dark as to the cause of this condition and therefore have no scientifically determined specific treatment for it.

TYPES TO BE DISCUSSED

In this discussion we shall not be concerned with

the acute arthritides nor with the specific types of chronic joint disease, such as those due definitely to sepsis, to the pneumococcus, to the tubercle bacillus, to the gonococcus, to the spirochaeta pallida, or to gout. We have left the great bulk of chronic non-specific arthritis that is met with in daily practice. It is customary to divide this great group into two types—*rheumatoid arthritis* and *osteoarthritis* (Garrod, 1907). Synonyms are atrophic arthritis and hypertrophic arthritis; chronic infectious arthritis and degenerative arthritis. In America we have more frequently used the terms chronic infectious arthritis or atrophic arthritis for that type occurring in younger people, and hypertrophic arthritis for that type occurring in older people, but there is a current tendency toward the more general adoption of the English terminology of rheumatoid arthritis for the younger and osteoarthritis for the older patients. Here we encounter the first definite controversy in this controversial subject. The original differentiation of the two types served a very helpful purpose in the study of the disease, and most observers still sharply distinguish them and really consider them distinct entities with different etiologies, the first due or related to infectious processes, and the second definitely a degenerative disease. There is, recognition, however, of transitions between the two types, or of mixed cases, that show features belonging to both, so that there are not a few students of the disease who feel that no sharp differentiation between them is really possible and that the typical case of rheumatoid arthritis, on the one hand, and osteoarthritis, on the other, really belong to different extremes of the scale of variations in one and the same disease, the differences depending more upon the type of reaction of the patient than to any peculiarities of its etiology.

Briefly, the clinical features of rheumatoid arthritis are its occurrence in the younger age group, the acute onset in about half the cases, the frequent presence of fever of mild or moderate degree, the multiple joint involvement including that of the proximal interphalangeal joints, its apparent predilection for young people of the asthenic type with undernutrition, unstable nervous systems, liabiltiy to fatigue, and vulnerability to strain. Further, there occur clinical manifestations of acute or subacute inflammatory processes in the joints with swelling, heat and pain, changes in the blood formula that suggest infection, increase in the sedimentation rate of the red blood cells, and the very frequent association of chronic infectious foci in the upper respiratory tract or elsewhere.

On the other hand, osteoarthritis occurs in the older age group; it has as a rule an insidious onset, involves relatively few joints, chiefly the spine, the knees, the hips and the terminal interphalangeal joints in the form of Heberden's nodes. Its victims are more usually of the robust, plethoric, pyknic type with tendency to obesity. There are seldom acute manifestations. There are no changes in the blood formula and no acceleration as a rule of the sedimentation rate.

In rheumatoid arthritis the synovial membrane is primarily and chiefly involved, while in osteoarthritis the cartilaginous degeneration seems to be the essential factor, and this is followed by a proliferation of bone about the periphery of the joint so that there are more or less characteristic X-ray changes for each type. The tendency to bony ankylosis is marked in severe cases of rheumatoid arthritis while in osteoarthritis this rarely occurs.

ETIOLOGY

As with other chronic ailments, the *predisposing causes* of arthritis are important, and the same predisposing causes with some variations in emphasis are applicable to both of the common types of chronic arthritis. Many people harbor foci of infection; comparatively few of them have a chronic arthritis. The fertile prepared soil is as necessary as the seed in order to produce the crop of rheumatic pains, aches and disability.

It is not known to just how great an extent these predisposing factors are inherited, but there is an increasing belief that such factors play a large part in the predisposition to disease. A family history of arthritis is not at all unusual and the physical habitus or type of individual already mentioned in connection with arthritis is, of course, an inherited character.

Important environmental factors are exposure to cold and wet, trauma, fatigue and physical or mental shock. Fatigue and shock are, of course, important factors in any infection. Trauma is of particular importance in arthritis and may be of the most varied sort. Clinical symptoms may be precipitated by a single incident, such as an automobile wreck, or the traumata may be multiple, minute, re-

peated incidents, as, for example, in the weight-bearing joints of obese older patients.

One factor that has been receiving increasing attention is the *circulation of the affected part*. Certain clinical observations and experimental work are indicative of a defective circulation in the joints. The direct microscopic observation of human capillaries in the skin of the nail fold and the study of skin temperatures show that in at least half the patients with chronic arthritis the blood flow is demonstrably decreased. In the experimental work of tying off nutrient vessels it is found that joint changes can be so produced, and more easily produced in older than in younger subjects. The mechanism producing the poor circulation in rheumatoid arthritis affecting younger individuals is probably through the disturbed action of the autonomic nervous system, including the vasomotor nerves. We note the frequent occurrence of cold, cyanotic, damp hands and feet in these patients. In older patients with osteoarthritis there is also the tendency to arteriosclerotic changes and the diminution in the number of collateral channels, although the work of Keefer and his associates on the pathology of the disease did not reveal any very direct relationship between the degree of arteriosclerosis and the degree of joint involvement. The importance of the circulation is emphasized because of its bearing upon certain methods of therapy.

The *exciting cause* of rheumatoid arthritis is at the present time a matter of much debate. Practically all American observers are committed to the idea that the disease is an infection and the term chronic infectious arthritis is probably used more widely than the term rheumatoid arthritis. We are impressed also with the importance of focal infections as the gateways and primary sites of the disease. English workers are in accord with us on these points. Other European physicians are less enthusiastic. Acceptance of the doctrine of focal infections is increasing in Germany and making rather slower headway in France. So, from a world standpoint, it cannot be said even here that there is complete unanimity of opinion. If we accept the disease as an infection and ask what is the infecting agent, we encounter much confusion. Rosenow was a pioneer in attributing the disease to a streptococcus, a green streptococcus. Haden has partially confirmed his work, but most workers have not been able to duplicate his findings. Cecil, Nicholls and Stainsby described in a majority of their cases positive blood cultures and positive cultures from joints, revealing usually an attenuated hemolytic streptococcus. Here, again, other bacteriologists and clinicians, copying their technique as exactly as possible, cannot duplicate their results. Several workers find from 5 to 15 per cent positive blood cultures with the streptococcus in chronic arthritis. But an analysis of the routine blood cultures in the Mt. Sinai Hospital has shown that this percentage of positive streptococcus cultures occurs in the general clinic without regard to the presence or absence of arthritis. Other bacteriologists (e. g., Olitsky and Long) find such streptococci as frequent contaminants in bacteriological work with tissues. Many workers are unable to cultivate any organism from blood or joints of chronic arthritics. But the positive results enumerated and the frequent finding of streptococci in chronic foci of infection in association with arthritis have strengthened the wide-spread feeling among the profession in this country that a streptococcus of some type is the common bacterial invader in rheumatoid arthritis. This assumption is further strengthened by the presence in the blood of many arthritics of immune substances, agglutinins and precipitins for the streptococcus. But here also there are conflicting reports and differences of opinion. At best, the relationship of the streptococcus to chronic arthritis is still an assumption and is lacking in scientific demonstration.

When we come to a discussion of the pathogenesis, we appreciate further some of the absurdities of the situation, for, having just stated that we have no scientific proof that the streptococcus is the cause of chronic arthritis, we proceed to ask how does the streptococcus cause arthritis. This, again, is a matter of some interest in relation to certain methods of treatment. There are two general viewpoints: First, that joints are directly infected by the organism concerned, and, second, that the organism does not invade the joints, but that the arthritis constitutes a method of reaction on the part of the body toward the general infection, an allergic or hyperergic phenomenon, if you will. The connective tissues, including the joints, have become hypersensitive to this antigen by reason of the prolonged or repeated doses of the bacterial toxins.

Again, we have no scientific demonstration of the accuracy of either of these ideas. Many more bacteriologists have failed to demonstrate the organisms

in the joints than have succeeded. The allergic conception is the more recent one and is apparently growing in popularity, though it is strongly assailed by some immunologists who feel that allergic ideas in general are being carried too far in the explanation of human disease. The only bit of direct evidence for the allergic explanation lies in the occurrence of arthritic phenomena in serum disease, thus indicating that the joints can take part in general allergic situations. Certainly immunity reactions with the streptococcus cannot be accepted as scientific proof in view of the uncertainties of this relationship already outlined.

So we must admit that we really do not know the cause of rheumatoid arthritis nor the manner of its production, but many physicians suspect a streptococcus as the exciting agent and are intrigued by the idea that the arthritis itself is an allergic manifestation to the chronic infection.

TREATMENT

Rheumatoid Arthritis. In the treatment of any infectious disease one naturally these days attempts to use specific means in combating the invader, although we recognize the fact that with many infections the physician must by treating the patient aid nature in overcoming the malady. In the treatment of rheumatoid arthritis, or chronic infectious arthritis, the eradication of *focal infections* has occupied the center of the stage in this country for many years. This doctrine, as I have said, is increasing in popularity abroad. In our own country the experience of many years has somewhat tempered our enthusiasm. Very few, however, doubt the advisability of removing all easily accessible foci of infection in such cases, but we no longer expect an immediate and dramatic cure. There is a general feeling now that such dramatic results may be seen only in the relatively mild and early cases, and particularly in young people, and that the later in the course of the disease that such foci are attacked, the less favorable is the result obtained. One great besetting sin in our therapeutic management of chronic ailments is our tendency to limit our efforts to one therapeutic approach. For a long time it was so with the removal of focal infections. Instead of beginning there, the treatment both began and ended there. Now one gets the impression that the center of interest is passing from focal infections to become concentrated upon the use of *vaccines.* Whatever may be one's impression of the value of vaccines in chronic arthritis, there is the same lamentable trend of depending entirely upon such a therapeutic measure over periods of weeks and of months to the neglect of all others.

In regard to the use of vaccines in general, from the standpoint of prophylaxis they have been of great value to medicine. Therapeutically they have proven notoriously ineffective. In controvention of this statement one might cite the value of vaccines in the treatment of boils, but even here one is interested chiefly in preventing the recurrence of boils rather than in the treatment of those already present.

We have passed in review the chaotic state of our knowledge regarding the association of streptococci or other organisms with chronic arthritis and we can therefore understand the point of view of the Council on Pharmacy and Chemistry of the American Medical Association in denying to vaccines for use in arthritis a place in New and Non-official Remedies. Nevertheless, they are very widely used in this country and in England where the British Committee for the Study of Rheumatism recommends them. The foremost students of the disease in America are becoming more and more lukewarm in their attitude toward vaccines and few prominent advocates of their use remain. Some cases of arthritis have, of course, responded favorably to the use of vaccines as they have to any other form of therapy. Many sceptical physicians have used them with the attitude that they are unwilling to omit in such a disease any possibly favorable influence. With such a point of view we must, of course, be particularly careful that the treatment does no harm.

If one can convince oneself that the manifestations of arthritis are allergic phenomena incident to chronic or repeated infections with streptococci or other similar organisms and if one can feel that he can demonstrate the antigen to which the tissues are hypersensitive, then the use of such a bacterial antigen in the form of a vaccine for the purpose of desensitization attains a theoretically favorable position. This is a favorite point of view just now and efforts are made to determine the proper antigen by means of intradermal tests, as in the study of pollens in hay fever. The vaccines are usually now given intravenously, and the dosage advised varies greatly with different authors with a tendency toward smaller and smaller doses. There

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is unanimity of opinion that the dose should not be large enough to give a general reaction and that the focal reaction in the joints should be mild. Initial doses advised vary from less than a hundred organisms up to five million, the dosage gradually increasing with succeeding injections every five days to a week. Such treatments are continued for several months. Many observers note the favorable psychic effect upon the patient with the regularity of treatment, the sterile precautions, the intravenous injections and perhaps the local response on the part of the diseased tissue. Such psychic effect in chronic diseases is not to be minimized. Let me here emphasize again the point that whatever efforts we may make toward specific treatment in chronic arthritis, such efforts should be the beginning and not the end of treatment.

The use of *foreign proteins* intravenously in the treatment of rheumatoid arthritis is sometimes associated in our minds with the use of specific vaccines, although the mechanism of their effects is probably quite different. Killed cultures of typhoid bacilli (typhoid vaccine) and proteoses have usually been chosen as the foreign proteins. With the former the initial injection is from twenty-five to fifty million organisms and the injection is followed by chill and fever and considerable discomfort for a number of hours. While many patients have been benefited by this procedure, the improvement is rather short lived compared to the discomfort and even the danger of the method, so that it seems to be becoming less and less popular. The mode of its action is probably in part at least related to that in the treatment of peripheral vascular disease. In connection with such cases it has been demonstrated that foreign protein shock and also other types of fever and anesthesia produce a change of tone in the autonomic nervous system, including the vasomotor nerves, resulting in peripheral vasodilatation and an increased flow of blood. This effect in chronic arthritis is closely akin to what we try to accomplish by methods of physical therapy. Rowntree and Adson have utilized an even more dramatic method for producing this result by operations upon the sympathetic nervous system. After ganglionectomy and ramisection, they have described some remarkably favorable results in carefully selected cases.

Rest. During the acute stages of the disease and when there are manifestations of acute inflammation in any joint, the joint and usually the patient as a whole must have *rest,* rest from physical exertion, from physical trauma and from emotional disturbances as far as this is practicable under the existing circumstances. The physician must use his ingenuity in determining how best to secure rest for the affected joint. Sometimes a light cast or splint is advisable, or some special arrangement of pillows, and the joint should be held in the most favorable position with the possibility of contractures and unfavorable deformities in mind. One must be careful, however, that immobilizing apparatus be not allowed to remain in operation too long, for there is always the spectre of bony ankylosis in the background. As soon as the acute features are over, active movement of the joint should be instituted within the range that does not cause severe pain and that is not associated with any return of acute inflammation. After the acute phase has quite subsided the principle of rest for weight-bearing joints must be kept in mind, although other forms of exercises for these joints may be gradually increased.

In *pharmacotherapy* we have no specific for the treatment of rheumatoid arthritis. The most valuable drugs are mild sedatives and analgesics for their aid in securing rest and in relieving pain. Of the former, one may use short courses of bromides alternating with short courses of barbiturates. Of the latter, aspirin and pyramidon may be used. Cinchophen and neo-cinchophen have their advocates, but these drugs are somewhat in disrepute at present. While one does not expect to see the dramatic results by the administration of salicylates in rheumatoid arthritis that one sees often in rheumatic fever, nevertheless they do have an analgesic effect.

There may be indications, of course, for the use of other drugs in the treatment of any given case as determined by the general diagnostic study. Constipation may require them. Anemia should be appropriately treated and metabolic faults may suggest the use of arsenic or of thyroid products. General tonics are frequently found to be advisable.

Many drugs have been advocated in the treatment of chronic arthritis. They come, have their day, and go. Iodides retain some of their popularity. Sulphur compounds have recently had a

certain vogue. Forestier and other French writers describe good results from the intravenous use of gold salts.

The *diet* in rheumatoid arthritis is another controversial field. Perhaps in no other branch of therapeutics are there so many differences of opinion and so many fads among physicians as in regard to diet, a fact that is often very confusing and perplexing to patients who are only too prone themselves to the development of dietary fads. It would seem much wiser to take the stand that diets should never be restricted unless there are very strong and very definite reasons therefor, as for example, in diabetes mellitus, in gout or in obesity. Pemberton, long a faithful student of this disease, recommends a restricted diet with the minimal protein requirement, most of the calories in the form of fat, with abundant vitamines, but with markedly reduced carbohydrates. He is of the opinion that a general restriction in the diet in itself brings about some metabolic change that is favorable to the patient with chronic arthritis. Fletcher advocates a special diet including low carbohydrates and high vitamin content based on the analogy of certain lesions that he finds in the colons of patients with arthritis to those described in rats suffering from nutritional diseases. The general consensus of opinion, however, is that there is no specific diet for arthritis, and that the patient should be fed according to the state of his nutrition and perhaps other metabolic features disclosed in the course of his examination. It may be urged that undernourished patients be given high calory diets with the use, if necessary, of insulin, beginning with small doses and increasing to ten units one-half hour before the two principal meals of the day. On the other hand, obese patients should by all means be reduced by a diet as strict as is necessary, not only to improve the state of their nutrition but to reduce the repeated traumata to the weigh-bearing joints.

Transfusion of Blood. In arthritic patients with anemia very marked improvement may often be noted after repeated transfusions.

It is an interesting fact that in meetings like those of the American Committee for the Control of Rheumatism, there may be marked controversies over certain points in regard to focal infections or vaccine therapy or dietotherapy, yet all the speakers will unite in advocating at some stage of the disease the use of *physical therapy*. Still it is my impression that this valuable, indeed indispensable method in the treatment of chronic arthritis, is very widely neglected. It is a very old and was a very honorable type of therapy, but so great has been our neglect of it that it has become the stronghold of irregular cults, and we are now engaged in the effort to bring it back into the fold where it belongs. The Council on Physical Therapy of the American Medical Association has published a small handbook and will, I believe, produce a second edition of this work this fall. All who are interested will find it quite helpful and useful. In its column in the *Journal,* reports of the Council frequently appear with the description of some piece of apparatus or with the recommendation of some method of treatment.

Physical therapy is valuable in the treatment of arthritis chiefly in the later rehabilitation stage. One attempts first to remove or treat foci of infection, and by rest and other measures to allay the active inflammatory processes, and later by physical means to restore the joints and muscles to a more satisfactory anatomical and functional state. Certain physical measures, however, may often be used to advantage in the early stages of the disease.

The particular physical methods that are of value in chronic arthritis are: the applications of heat, of massage, and the judicious use of rest and of exercise. As we have already said, the acutely inflamed joints should be placed at complete rest and such already hot, swollen, tender joints do not bear well the application of additional heat. But with the subsiding of the acute phase do not leave the joint too long at rest, and do not postpone too long the use of physical measures. It is not necessary to have an elaborate and expensive set-up in order to utilize physical therapeutic measures in the treatment of these cases, although, naturally enough, more may be expected of a skilled technician than of a poor or inexperienced one.

Heat may be applied in many different ways, and methods for its application may be devised in almost any home. Hot water is usually available and arm baths or foot baths can be extemporized from the usual household equipment. A common electrical heater with a reflector is a satisfactory means of utilizing infra red rays. Electric lamps, electric pads, or, in the absence of electricity, hot water bottles, hot compresses and either local or general

warm baths are valuable. The degree of heat need not be great; indeed, it is often well that it should not be, but there is little point in utilizing heat once a day or three times a week in the doctor's office; provision should be made between visits for the more frequent and prolonged use of this valuable agent. It may be used at least three times a day for increasing periods of time, for fifteen minutes to half an hour, or longer. The parts, of course, should be carefully protected from rapid cooling after these treatments.

Local heat induces a dilatation of the blood vessels, an increased flow of blood and exudation of lymph, and in this way loosens the tissues and puts them in more favorable condition for the use of massage or of active and passive movements.

A favorite method for the application of heat at present is the use of diathermy, in which the heat is generated within the tissues, and presumably the joints and muscles themselves are more directly influenced. Although there is no striking rise of temperature as measured by the thermometer, the heat is generated within the tissues and dissipated by the increased flow of blood which is of course one of the body's protective mechanisms against external forces. Diathermy, however, is not a particularly favorable means of heat as a precursor to massage and exercise and, if it is used, it may well be followed by a brief period of rest and then by another type of heat before the massage or exercise is begun. Regardless of what types of heat are used during the day, it will often be found helpful to have the patient take a warm tub bath immediately before retiring for the night; the water should be comfortably warm and he should lie in the water for fifteen or twenty minutes; this is soothing and relaxing to the joints and muscles and is conducive to sleep. One must be careful to avoid prolonged hot baths that debilitate or weaken the patient.

By means of massage the muscle tone is improved, muscular atrophy is combated, the local circulation is increased and the flow of lymph is accelerated with aid in the removal of waste products. As long as there is any pain or tenderness in the joints, massage should not be applied to the joint itself but to the adjacent tissues. It is important that the massage be not sufficiently deep or strenuous to move the joint in any way. Massage should always be performed in even, smooth strokes, and when on the extremities in the direction toward the heart. The patient should be lying down, thoroughly relaxed, with the part to be treated on a level with the heart. Massage is begun in the proximal portion of the limb, and at first should be very light and of short duration. If a trained technician is not available the physican can show some member of the family how the procedure should be carried out. It is important to emphasize that massage may be overdone, particularly in weak, debilitated, or in old persons.

The importance of rest has already been emphasized. When acute manifestations have subsided exercise should be begun, but passive exercises had best be avoided except at the hands of trained and skilled technicians. It is much safer to encourage the patient to use active exercises of the parts without weight bearing, of course, and within the limits of reasonable comfort. Exercise can best be utilized immediately after heating.

Orthopedic Treatment. In chronic progressive cases do not delay too long the calling in of the orthopedic surgeon to assist you. He may do much to prevent ankylosis, the worst type of contractures, and earlier in the disease his aid may be valuable in the correction in feet, knees, hips, and spine, of static defects that throw additional strain with repeated traumata upon the weight-bearing joints. In this field he may be particularly helpful in the osteoarthritis of later life.

OSTEOARTHRITIS

Most of what has been said in regard to the treatment of rheumatoid arthritis may be applied also to that of osteoarthritis with the modifications that would naturally occur in any well individualized therapy. Indeed, many students of the disease do not attempt an accurate differentiation between the types for therapeutic purposes, but, treating each case upon its own merits, are willing from the therapeutic standpoint to regard them as of the same general nature.

This type, as we have said, occurs usually in older people, is of insidious onset, and usually lacking in the more acute manifestations. If easily accessible foci of infection are present, they should, on general principles, be eradicated. One does not usually expect dramatic results. Vaccines are rarely used. The utilization of rest, drugs, physical therapy, orthopedic methods are quite similar to those in rheumatoid arthritis.

Directions concerning the diet in osteoarthritis again vary greatly. As many of these patients are obese or at least show some degree of over-nutrition, it is important that the diet be of low caloric value until there has been a sufficient weight loss. Reports of metabolic findings in this type of arthritis, as in the other, are quite varied and suggest that various findings of retarded basal metabolic rate, changes in sugar tolerance or in purin excretion are related to other factors in that particular person and not directly to the presence of the arthritis. If the diet is to be further regulated it should be done with the findings in the individual patient as a guide. Quite commonly citrous fruits, tomatoes, and certain other usually healthful foods, are forbidden on purely empirical grounds.

In the treatment of chronic diseases like these we have been considering the wise physician will never forget the value of psychotherapy. Often the most valuable contribution he can make to the patient's welfare and comfort will come through this means, by teaching him how to live courageously, how to face realities serenely, how best to circumvent his liabilities and to make the most of his assets. In this connection occupational therapy and training may be of great assistance.

In *summary,* we may say that, in spite of the lack of scientific proof, there is a wide-spread impression that rheumatoid arthritis is closely related to streptococcus infection and specific methods of treatment are attempted in the eradication of focal infections and in the use of vaccines.

Each case should be studied as thoroughly and as comprehensively as may be possible under the circumstances. Each discovered abnormality should be listed in the diagnostic summary and should be taken into account in the further outline of the treatment, including dietotherapy, pharmacotherapy, physical therapy and psychotherapy.

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TREATMENT OF PNEUMONIA WITH SERA AND IMMUNOGENS—CASE REPORTS.*

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It is my intention to cover this subject very briefly and with no more words than necessary to my individual vocabulary. I pose not as a scholar or pioneer, but, in following others, I have been led to report these few cases, because, to me, they have been both encouraging and cheering in several cases of pneumonia of severe involvement and poor physical resistive forces.

Case 1.—P. B. J., male, aged 65, convalescent from a Pott's fracture and three weeks' pneumonia, was seized with lobar pneumonia six weeks after the advent of the first attack. Temperature 104.2 F.; pulse fibrillating, thready, rate 120; respiration 30 (plus); cyanotic, exhausted; alarmed; family terrified because of my colleague's prognosis; right lung half solid.

I did not take time for the dermal test, but immediately warmed and gave 20 c.c. of National Drug Company's Type I, II, III, refined pneumonia serum intravenously and 1 c.c. Parke-Davis' pneumonia immunogen deep in the Deltoid. Digitalis, caffeine and coramine were given to support the heart; also ¼ gr. morphia.

In less than one-half hour Mr. J. had a severe chill lasting twenty-five minutes. I gave him 7 m. adrenalin for fear that the chill might be anaphylactic shock.

In twelve hours the patient was improved, breathing easily, with temperature down to 100.8 F. In twenty-four hours temperature was 99.5 F., pulse 90, respiration 20. Lung involvement no less and not modified. Immunogen given second time.

I came prepared to administer another 20 c.c. of the serum, but waited because of his marked improvement. In forty-eight hours he was normal in temperature, pulse 84, respiration 18, lung clearing up rapidly. Four days after the serum his lung was clear and his recovery speeding. This will be two years in June, and he remains well.

Case 2.—Male, aged 43. Involvement of both lungs—lower and middle lobes of the right, and lower total and bottom margin of the upper left. Condition was quite as critical as above case, and duration was then of six days. Cyanosis was marked and patient unconscious.

Twenty cubic centimeters of National Drug Co.'s refined serum was administered intravenously. Patient had a slight chill. Because of the distance I did not see him again for twenty-four hours. He was then improved in respiration, had no great cyanosis; temperature about 100 F.; pulse 90. Another 20 c.c. was given—with no reaction.

In forty-eight hours the lungs, which for the first thirty-six hours were still solidified, were markedly improved as to extent of involvement and intensity. Temperature was from 99 to 99.5 F.; pulse 84, respiration 22 to 24.

Two days later I called again and found the patient cheerful, smiling, lungs clear, temperature normal, pulse 80, and respiration 18. Very weak, but with a fair color. Recovery was uneventful and he is now about his normal work as farmer and sawmill boilerman.

On my first visit as consultant the case looked done for, and it seemed as if he must die in a few hours. I was tempted not to administer the serum as I felt that it would be folly to waste the twelve dollars which the medicine cost.

Case 3.—Mrs. Kate C., widow of Dr. A. B. C., aged 68 years. Mrs. C. had previously had three strokes of apoplexy. For two years her blood pressure had jumped between 220 and 280. She had a very bad myocarditis with frequent attacks of cardiac asthma. She also had nephritis and pyelitis, and was possessed of a large ovarian tumor probably containing six quarts of fluid. Naturally her digestion was poor.

The day following last Thanksgiving I had the task of informing her of the death of her brother upon whom she leaned almost as daughter to father. Seven hours later I was called back to her home and informed that "she had a heart attack and was burning up." My colleague in Narrows had just left and had pronounced her case as broncho-pneumonia. This diagnosis was concurred in by me. By midnight she had developed bi-lateral lobar

*Read at the meeting of the Southwestern Virginia Medical Society in Marion, Va., March 23, 1934.

pneumonia and I was tempted to phone her relatives to defer her brother's burial a day, that they who had been so close in life might be not even separated in death.

At daybreak she was still alive, to our wonderment! She had all of the contrary symptoms of a fatal pneumonia, complicated by the above entities and cycles.

During the night the nurse had administered in the muscles all types of stimulants procurable in our locality. She was not, however, given oxygen.

At 9 A. M., I gave her morphia gr. ¼, and then 20 c.c. of the pneumonia serum, types I, II, III, plus ½ c.c. of immunogen. Immediately after the intravenous she was given six drops of adrenalin despite her hypertension. These doses were repeated in two days, three doses of the serum being given. Each dose caused her temperature to go lower until on the fifth day it was normal, with a fair pulse and respiration. Her lungs became clear, with the possible exception of fluid in the extreme dependent part of her chest cavity. Her bronchial tubes continued somewhat musical.

Despite our elation, on the seventh day she had a relapse, likely from stasis, due to her impaired circulation. This developed rapidly into a fresh lobar involvement. The serum was administered on three other occasions, from twenty-four to thirty-six hours apart. On the ninth day she again breathed easily, or as easy as was her custom. Her temperature dropped to less than 100 F., and we almost began to entertain hopes. However, she became worse on the night of the ninth day and died on the morning of the twelfth day.

I feel that she would have died in two or three days without the serum, and I consider this case remarkable because of the terrible condition she maintained physically, daily, and because of the fact that she threw off one attack of pneumonia in six days and looked somewhat as if she might overcome the second seizure.

Case 4.—J. W., a boy of 14, who resembled the proverbial "Lily of the Valley" after three months of whooping cough. Right lung was three-fourths solid. National Drug serum given second day. Chill lasting ten minutes was followed by near collapse. In twenty-four hours he was improved. In four days the lung was clear. Recovered rapidly, and now, five weeks later, is doing a few chores on the farm.

Case 5.—A. H., aged 38 next July. This man was an ex-patient at Oteen. Had been drinking one quart of corn whiskey daily for six months. Became ill on March 1st. I saw him with pleurisy on March 2nd. On the 4th he contracted pneumonia in right lower lobe. Temperature 105 F., cyanotic, respiration 32, pulse 120-130. Became delirious that afternoon. Delirium tremens followed closely that night.

National Drug Company's serum was administered at 11 P. M. Whiskey given every two hours. Stimulants, morphia and digitalis were given by hypodermic. Ortal sodium q. s.

The cyanosis was still marked twenty-four hours after the serum was given. Delirium tremens was under control. Still unconscious, but pulse, respiration and temperature showed improvement. Solidification was undiminished.

Two days later a second dose of the serum was contemplated, but, on seeing the patient, I found him with a temperature of 100 to 101, color good, pulse fair and only 84, respiration 20 or 22. Lung was rapidly improving by lysis.

Five days after the administration of the serum, the patient had no penumonia and was normal in pulse, temperature and respiration.

He is still spending more than half of his day in bed, but is making a very satisfactory recovery and will probably not of necessity return to Oteen.

As to the sera, they are only useful in the lobar type of pneumonia and are of types I, II, and III combined, National Drug Company.

The immunogens are used by me in every case of bronchial pneumonia. They are also used as a prophylaxsis against pneumonia, as well as in acute bronchitis and severe coryza. I have used these immunogens in every case for better than two years and have not lost a case of bronchial pneumonia. Most of the cases in children have shown rapid improvement and some have been terminated in twenty-four to seventy-two hours. At least I am either optimistic or foolish enough to lay the improvement in bronchial pneumonia largely to the P. D. immunogens. I can say positively that the cases have been shortened in duration and tempered in severity.

May I thank you for your kind attention in listening to my attempt to stress these things I consider real advances in treating this arch enemy, the Reaper, bronchial and lobar pneumonia.

XUM

THE CLASSIFICATION AND ETIOLOGY OF HEART DISEASE.*

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Preliminary classification of causes and etiological types of heart disease has been attempted in various sections but the work is only begun. It is only from accurate knowledge of etiological factors of disease that we can concentrate our efforts to the eradication of these diseases.

For purposes of discussion in this symposium on heart disease, I have elected to classify heart disease into diseases of the pericardium, myocardium, endocardium and the coronary system.

Any satisfactory classification of heart disease must take into consideration, if possible, etiological, pathological and functional factors. A proper interpretation of symptoms and signs presupposes a clear understanding of the above factors. No longer in the diagnosis of heart disease can we consider pathology alone, nor function alone, but must add etiology as well. A diagnosis based upon all of these factors really enables us to apply effective therapy, which is, after all, one of the most important duties in the practice of medicine.

Disease of the pericardium is much more common than we think. It may be serious in itself, or entirely unimportant, or merely an incident in other serious diseases.

There are three more or less distinct types of pericardial disease—acute, chronic adhesive pericarditis, and congenital defects—which will not be considered in this discussion.

Acute pericarditis may be still further divided into rheumatic, secondary, and idiopathic.

Rheumatic pericarditis is caused by the organism causing rheumatic fever. It is most often but a part of a pancarditis in which the endocardium and myocardium are also involved. It is not the acute stage of this disease which is especially serious, for it is indeed rare for acute rheumatic pericarditis to be fatal and many of the patients are not very sick. This disease, however, merely marks the beginning of a process which ends in chronic heart disease, decompensation and death.

The secondary type is usually found in association with or following other infectious diseases, such as pneumonia, influenza, tonsillitis, tuberculosis and general sepsis. The pericarditis may also arise from an extension of an inflammatory process from the pleura or mediastinum. There is another type of secondary pericarditis which numerically is the most important group—occurring as a terminal infection in various chronic diseases, especially Bright's disease. The organisms concerned in this type of pericarditis are most often streptococcus haemolyticus, staphylococcus aureus, and pneumococcus.

The pericarditis which occurs in association with coronary thrombosis results from necrosis of the underlying myocardium.

The last type of acute pericarditis may be termed idiopathic, apparently occurring as a distinct entity and not in association with any of the usual antecedent or accompanying causes. The prognosis in this type is usually very good.

If the pericarditis is so marked that there is abundant fibrous exudate, and if the inflammatory process persists, there is usually much new tissue formation, in which case the two layers of the pericardium may become completely adherent, obliterating the cavity, with the formation of adhesive pericarditis. In severe cases the pleural and mediastinal tissues also become involved so that the pericardium becomes adherent to the surrounding thoracic structures.

Diseases of the myocardium may be classified as rheumatic, syphilitic, hypertensive, arteriosclerotic, a heterogeneous group caused by other less common but very important infections, and toxic, especially thyrotoxicosis and myxoedema. These different types occur in varying frequency in different sections of the country, one type being more frequent in certain communities; another type being more frequent in other communities.

Rheumatic myocardial disease is very much more frequent in New England, for example, than in Virginia and must be somewhat dependent upon climatic conditions, being more frequent in cold damp climates than in warm dry climates. Social and economic conditions also seem to be important factors, since this type of heart disease is much more frequent among the poor and among those

*Read as part of a Symposium on Heart Disease before the Seaboard Medical Association of Virginia and North Carolina, at Norfolk, Va., December, 1933.

whose environment is not so favorable. The real basic cause is the same that causes the original rheumatic infection, which has not as yet been definitely identified, though it is in all probability of the streptococcic group. The myocardial disease, like the pericardial, is but one part of the general rheumatic carditis, for it is most unusual to find one portion of the heart diseased to the exclusion of the other. We do not as yet know whether the reaction in the myocardium is the result of active invasion of the muscles by bacteria, or of tissue reactions, allergic in nature, or of toxins elaborated in various foci of infection present in the rheumatic disease. Bacteriological, serological and allergic studies now in progress will in all probability give the answer to the uncertain knowledge which we have at the present time.

Cardiac syphilis is a very important and serious condition. Like rheumatism, this type of heart disease is more frequent in certain localities than in others. It is especially common in the South owing to our large negro population, syphilis being notably frequent among the negro race. Myocardial syphilis is not nearly as frequent as vascular syphilis. In the wall of the heart it is said to occur as a sclerotic process, a gumma, or as areas of fatty degeneration. The causative agent is, of course, the treponema pallidum.

Hypertension and arteriosclerosis are separate pathological conditions, though they are very frequently associated. This is true because they are both common to the same age period. Hypertension, however, is so frequent and so important clinically, while at the same time sufficiently different, that it is important to give it the emphasis of separate portrayal. The cause of hypertensive heart disease is not known, for this takes us back to the cause of hypertension which is as yet shrouded in mystery. Heredity is probably one of the most important causative factors. Age, and the wear and tear and strains of life are also important. Probably certain toxic and metabolic factors are also important, though just what these factors are we do not know.

We next consider arteriosclerotic heart disease, which after the age of thirty becomes increasingly frequent. Arteriosclerosis can produce myocardial disease directly only as it involves the coronary arteries to such an extent as to limit the blood supply to the myocardium; yet, it may and does produce very grave disease of the heart muscle either by increased strain incident to serious vascular disease, or by involvement of the endocardium and thus seriously handicap the work of the valves, thereby adding to the work of the heart muscle. Since there is really no heart involvement characteristic of arteriosclerosis, except in so far as it is secondary to this malady, the etiology of this type of heart disease is entirely that of arteriosclerosis in general, of which there are four great factors: (1) the normal wear and tear of life incident to the passing years, (2) the acute infections, (3) the intoxications, and (4) those combinations of circumstances which keep the blood tension high.

The heterogeneous group would include the muscle affections resulting from the relatively uncommon infections such as diphtheria, scarlet fever, tuberculosis, typhoid fever, typhus fever, pneumonia, yellow fever, influenza, sepsis and focal infections usually attributable to streptococci or staphylococci.

At the present time it is very generally recognized that cardiac disturbance is frequent with thyrotoxicosis. The exact mechanism leading to the cardiac disability in this disease is not fully understood, though there are several theories which may be summarized as follows: (1) The increased demands on the heart which result from the increased general bodily metabolism; (2) just as the general bodily metabolism is increased, so also that of the cells of the myocardium is increased, which leads to increased wear and tear of the cells resulting in muscle failure; (3) the third factor is that of arterio-venous shunt with blood flowing through widely dilated thyroid vessels, which entails an additional strain on the heart; and, lastly, (4) acute degenerative myocardial changes. Just which of these are the most important etiological factors we do not definitely know, though it would seem that the first two are of greater importance.

Certain cases of myxoedema show marked cardiac hypertrophy and symptoms of myocardial decompensation. The cardiac lesion appears to be the result of thyroid deficiency. This condition is not very frequent, though it is sufficiently frequent for us to consider in the differential diagnosis of obscure heart disease.

Having considered in this sketchy and very incomplete manner diseases of the pericardium and myocardium, we now pass to those of the endocardium. Endocarditis may be classified on an etiological or structural basis, or as benign or malig-

nant, depending upon the severity of the symptoms. Probably the most useful classification is acute, subacute and chronic.

Acute endocarditis may be still further subdivided into rheumatic and bacterial, and the latter into primary or secondary.

The rheumatic and bacterial types are in sharp contrast with one another. The rheumatic type usually begins on a normal valve; the bacterial usually affects a previously diseased valve—most often one diseased by the rheumatic organism. The rheumatic type is very infrequently fatal in its acute stages, whereas the bacterial type often kills in the acute stages and rarely lasts long enough to be termed subacute.

As mentioned elsewhere in this paper, the rheumatic heart infection is essentially a pancarditis and not merely an endocarditis. The myocardial and pericardial disease may clear up and leave few or no traces, but this is not so with endocardial disease. A typical endocarditis consists of a verrucous inflammatory reaction. It seems to be a specific lesion for the rheumatic virus, for its structure is usually characteristic enough under the microscope to justify its diagnosis. These lesions appear in the line of closure of the valves and are not at the edge. They seem to begin in the valve structure rather than on them. Just why these vegetations are situated as they are gives much ground for discussion. We really do not know the exact pathogenesis of these deposits—that is, whether they result from direct bacterial action from the blood stream, or result from embolic invasion of the blood vessels which have been demonstrated by Bayne-Jones, Gross, Kerr and others to exist in the valves at about the site of the common occurrence of rheumatic lesions, or are due to local allergic reactions to toxins circulating in the blood.

The rheumatic causative factor is not definitely known, as has been said, though it is probably of the streptococcic group, as mentioned above. Climatic conditions are also important in the incidence of this infection. Of importance also is the occurrence of infection in families, statistics showing about 33 per cent to 50 per cent of patients with rheumatic infections having close family relations with the history of similar trouble.

Primary bacterial endocarditis is in the majority of cases caused by streptococcus viridans, though rarely the gonococcus may be the causative organism. The infective agents probably reach the valve by the circulatory route. Secondary bacterial endocarditis may be caused by various micro-organisms, though the haemolytic streptococcus, pneumococcus and staphylococcus are the most frequent. In these cases the endocarditis is but an incident in another serious malady and but little changes the clinical picture. Both primary and secondary bacterial endocarditis are alike in the fact that death is the usual end-result—somewhat postponed in the primary, to be sure, and more immediate in the secondary.

Frequently, in fact in most instances, patients survive the acute stages of primary bacterial endocarditis so that the disease becomes subacute, and we see the usual type of subacute bacterial endocarditis which Libman has so well studied and described. This is much the commonest form. It is most frequent between the ages of twenty and forty, and almost always has a history of antecedent rheumatic heart disease, the subacute bacterial endocarditis appearing in valves already affected with rheumatic endocarditis; thus rheumatic heart disease becomes the chief predisposing factor. There is much divergence of opinion as to the mechanism of the involvement of the endocardium. Some feel that the damaged endocardium with small thrombi or ulcerations forms a splendid nidus for lodgment of streptococci that happen to be circulating in the blood; whereas others maintain that these organisms reach the endocardium through blood vessels in the valves. Probably both are right since it is very probable that disease occurs in both ways. Race, climate, social and economic conditions play but a small part in its occurrence except in so far as they favor the predisposing rheumatic infection.

Chronic endocarditis is most often the end-result of rheumatic endocarditis which has healed and has produced the deformed, stenotic, and insufficient valves, giving us the various types of heart murmurs and associated clinical phenomena by which the diagnosis is made. There is another type of chronic endocarditis resulting from syphilis. There are two ways in which the infection takes place, either by extension of the aortitis to the commissures of the aortic valves with formation of adhesions of the cusps of the valves to the aortic walls, or by dilatation of the aortic ring consequent to the weakening which occurs with aortitis.

Both of the above types of chronic endocarditis

may exist for years and the patient lead a life of comfort and usefulness, though the break is liable to occur earlier and be of more serious consequence in syphilitic endocarditis than in rheumatic.

A very important and relatively frequent type of heart disease is that of the coronary vessels. This disease is either more frequent now than formerly, or we are becoming more proficient in its diagnosis, for it is certainly recognized more frequently now than it was ten or fifteen years ago. I am inclined to believe that the disease is really much more frequent than formerly, and it is apparently becoming more and more frequent. This is especially true among the men of our own profession, as was so well emphasized during the past month by Dr. Paul White. The deleterious effect upon the heart is, of course, the result of reduced blood supply to the myocardium. The coronary disorder may be the result of narrowing or blocking of the arteries. In the great majority of cases the cause is atheroma in which calcification takes place, which areas form excellent locations for the formation of thrombi. The cause back of atheroma is that back of general arteriosclerosis. Many factors undoubtedly play a part, notably abnormalities of metabolism, stress and strain of present-day competitive life, faulty diet, infections, and heredity. Rheumatism and syphilis are also important etiological agents. Rarely the disease is embolic in character, and this is especially apt to be true in youth. Advancing years and hypertension are important causative factors. It is much more frequent among males than females, which is almost certainly due to the increased stress and strain of the present-day professional or business man. It is most important that we make every effort to prevent this disease which causes such a high mortality and morbidity rate.

I have attempted to classify heart disease into diseases of its different structural parts merely for purposes of discussion. Clinically, such a classification is not sufficient, for we are interested not so much in the part of the heart diseased as in the nature of the disease and the functional efficiency of the heart as a pumping organ. I have also given the etiological factors which are most common; among these infection of one kind or another plays the most important. Next in importance is advancing years with the stress and strain which we encounter in this highly competitive age, plus the degenerative processes which are more and more in evidence with the passing years. Certain unknown toxic causes may also act in producing heart disease. Metabolic abnormalities, especially those of the thyroid, become more frequent as we become more proficient in the diagnosis of these maladies.

Medical Arts Building.

THE SYMPTOMS AND SIGNS OF CARDIAC FAILURE.*

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In the entire field of clinical medicine there is no subject of more importance than the one your chairman has assigned to me today. Cardiac failure comes under consideration in all diseases that may prove fatal, for the crises of disease are practically all dominated by the strength or weakness of the circulation. The subject concerns the surgeon, as well as the physician, and some of its phases confront every practitioner every day. According to Sir James Mackenzie, heart failure may be defined as that condition in which the heart is unable to maintain an efficient circulation during the efforts necessary for the daily life of the individual. This definition obviously includes cases of advanced failure, as well as those in which the failure is just beginning, and it is important to note that an adequate circulation can be maintained by a heart with considerable structural damage. It is needful to insist upon this point, as the absence of a clear conception of what heart failure means has led to the magnifying of certain obvious signs, such as murmurs, or arrhythmias, which are actually not important when considered from the standpoint of an efficient circulation. In the consideration of signs and symptoms of heart failure, it is manifestly difficult not to touch to some extent the

*Read as part of a Symposium on Heart Disease before the Seaboard Medical Association of Virginia and North Carolina, at Norfolk, Va., December, 1933.

etiology and therapy of the condition—subjects which have been or will be presented by other writers today. However, in so far as possible, the writer will present as briefly as the subject will allow the clinical side of the subject which is often buried under a mass of technical and, by comparison, trivial detail.

Heart failure may be acute or chronic. We have much to learn about acute heart failure. When we say that a patient with pneumonia, typhoid fever, influenza or septicemia, or following an operation dies, that he died because his heart failed, we make a simple statement. However, when we begin to analyze what has happened the problem is far from simple. Death in pneumonia, for example, may be due to bacterial or metabolic toxins derived from the cellular exudate in the lung acting directly on and causing degenerative changes in the heart muscle, or by acting on the vasomotor system, both central and peripheral. It is frequently difficult and at times impossible to tell at which end of the circulatory apparatus failure has occurred, the cardiac or peripheral vasomotor. Physiologists have taught us that the picture of shock—moist skin, extremely rapid and weak soft pulse, low blood pressure, ashy gray cyanosis, and weak almost imperceptible heart sounds—is not due to heart failure but peripheral vasomotor failure. The circulatory failure of severe acute infection is apparently a mixture of both cardiac and vasomotor failure, and frequently the latter predominates. The truth of this statement is readily proven by the fact that a blood transfusion in the terminal stage of pneumonia, after circulatory collapse has become marked, will improve markedly the state of the circulation for hours, as manifested by a slowing and increased volume of the pulse.

Valuable signs of acute heart failure are rapid dilatation of the heart, breathlessness, engorgement of the veins and the development of congestive phenomena. However, heart failure is possible without any of these. There may be only enfeeblement and, perhaps, even slowing of the heart beat. The symptoms of this type are mainly cerebral—due to insufficient blood supply.

The signs and symptoms of chronic heart failure afford a familiar clinical picture. The immediate outcome of the failure of the heart muscle is poor peripheral circulation, the evidence of which is manifest in the organs and tissues of the body, according as these parts are supplied by the laboring heart. If the left ventricle is affected, the result is improper functioning of the systemic arterial system with anemia of the tissues. If the left auricle is effected, there is edema of the lungs and cyanosis—due to stasis in the pulmonary vessels. If the right auricle and ventricle are involved, there are cyanosis, generalized edema and portal stasis. In a severe type of failure there may be a summation of all these symptoms.

The onset of cardiac decompensation may be gradual with fatigue, or gradually developing dyspnea on exertion and precordial pain, going on to edema; or it may be sudden with faintness, vertigo, pain in some cases, with sense of impending death or death itself.

Symptoms of heart failure are always entirely subjective at first and are variable. Breathlessness, constant or paroxysmal, is the outstanding feature of the decompensation status, and is due largely to failure of the respiratory center in the brain to receive the proper blood supply. Other causes may contribute physically, such as stasis in the lung tissue, fluid at the lung bases, and decreased vital capacity. Precordial distress and sense of oppression in the retro-sternal area are reflex-arc symptoms from an embarrassed heart muscle. Anorexia, nausea, vomiting, gastric flatulence and pain are due to congestion and stasis in the gastric circulation. Constipation and diarrhea are due to changes in the tonicity of the musculature of the bowel as a result of stasis of blood. Pain in the upper right abdominal quadrant is due to chronic passive congestion of the liver with stretching of Glisson's capsule. The mental symptoms ranging from vertigo, throbbing headaches, mental depression and failure to concentrate, to the development of a frank psychosis are best explained on the basis of faulty cerebral circulation.

The *signs* of heart failure depend upon the extent of the decompensation. They are best divided into those of early or beginning failure, and those of complete failure.

The signs of beginning failure are briefly as follows: Dyspnea on exertion, slight to moderate, occasionally orthopnea; cyanosis on exertion, tachycardia, sometimes arrhythmia, and cardiac enlargement to the left; an enlarged and tender liver, sometimes the spleen; moist rales over the lung bases with

diminished breath sounds and dullness on percussion. Jaundice may occasionally be present.

The signs of complete failure are constant dyspnea, even at rest, Cheyne-Stokes breathing, cyanosis of the lips and fingers, cold and clammy skin, dilatation of the alae nasi, and frequent short cough with tracheal rattling. The sputum is often blood streaked. Examination of the heart shows dilatation in all directions with a diffuse wavy apex beat. Murmurs previously noted have become fainter or have disappeared enitrely. A pulsating liver may be noted. The heart is extremely rapid and the rhythm totally irregular. The neck veins are dilated, the blood pressure is low, the pulse pressure very low, and at the wrist there may be a pulse deficit. Edema of the feet and legs, external genitalia, abdominal wall and occasionally edema of a dependent arm is present. Passive congestion is everywhere present with hydrothorax, ascites, and sometimes bloody diarrhea. The urine usually shows albumin and casts, and a low reading of the phenolsulphonephthalein test is often present. A psychosis is frequently evident. These, in general, are the symptoms and signs of chronic failure.

Any clinical classification of heart failure cases is manifestly difficult and not entirely satisfactory. Most textbooks discuss only two types, the congestive and the anginoid. However, the practitioner confronts cases in which certain clinical features predominate and a brief discussion of certain clinical types would seem proper. Dr. Cross, of Brooklyn, advances the following clinical classification which offers a fair approach to the clinical side of the question:

I. Symptomatic type, without edema or fibrillation.

II. Congestive failure type:

a. Usual type with edema, rapid pulse, and often fibrillation.

b. Chronic edematous type, with slow pulse, fibrillation either present or absent.

III. Hypertensive type, complicated with nephritis or arterio-sclerosis.

IV. Type secondary to thyrotoxicosis.

V. Anginoid type.

VI. Digitalis proof type.

I. Symptomatic type without edema or fibrillation—This is the type most often missed, and the practitioner should be constantly on the alert for such cases. They often go undiagnosed, for they are slow to consult the physician. The symptoms are few and the findings on physical examination are practically negative. Early fatigue and slight dyspnea in accomplishing acts that the patient could formerly perform with comfort are the chief symptoms. There may be slight to moderate increaase in the pulse rate and occasionally there is a slight hacking cough. A few minutes rest causes quick disappearance of the symptoms.

The physical examination usually reveals nothing definite. The heart sounds are not vigorous, there is no arrhythmia, no murmur is usually present and there are not evidences of pulmonary, hepatic or peripheral stasis. The blood pressure is usually within normal limits, or may be low. The apex beat may be slightly outside its normal limits, but, as the patients are often in the fifth decade of life, this in itself is not significant. If the patient is asked to take moderate exercise, the pulse may be slow to return to normal. The electrocardiogram may reveal preponderance of the ventricle or the height of the amplitude may be restricted. The history, then, consisting chiefly of moderate dyspnea on exertion is probably the chief thing to direct our attention to the heart, and we should be constantly on the alert for this type of case, for, if detected early, proper therapy and restriction of activity offers much in prolonging life and putting off the development of more serious symptoms.

II. Congestive failure type—a. This is the usual type, characterized by dyspnea, edema of the extremities, moisture at the lung bases, and rapid and often irregular heart action. However, there are certain early cases with congestive phenomena, which may be confusing. Coughing, wheezing respiration and haemoptysis may suggest pulmonary rather than cardiac disease. Mitral stenosis has been confused with pulmonary tuberculosis, and many cases of asthma are cardiac rather than bronchial. Jaundice and a tender liver with upper right quadrant pain due to heart disease may be considered to be due to the gall-bladder. A careful physical examination, however, will remove all doubt as to the condition, for the enlarged heart, the presence of valvular defects, the altered balance of the heart sounds, arrhythmia, the discovery of an enlarged liver, the presence of ascites or pleural transudates, all point to the cardiac origin of the symptoms.

XUM

b. Chronic edematous type: There is a type with chronic edema and slow pulse rate, which runs a rather protracted course. They may improve from time to time, but the edema is never entirely lost. I recall one patient of this type who, when I first saw him, had had chronic edema of his lower extremities for three years and, though he suffered moderate dyspnea on exertion all the time, had been fairly actively engaged as a yard foreman in a lumber mill. The edema would subside at night and over the week-end, but would never entirely disappear. He was fairly active for two more years before succumbing to a coronary accident.

III. Hypertensive type, complicated with nephritis or arterio-sclerosis—The cause of this type is elevation of the blood pressure, and the patient is usually, but not always, over forty years of age. In this group the symptoms are first purely subjective, but gradually increase in severity. Slight dyspnea on exertion and crepitations at the lung bases on the first day inspiration may be the only signs. The outstanding characteristic symptom of this type is an attack of noctural dyspnea. The patient is awakened from sleep gasping for breath and coughing up large quantities of pink frothy sputum. The pulse is weak and rapid, the color is ashy, and the extremities cold and clammy. Death seems inevitable, but within twenty or forty minutes, especially if morphine and atropine are given, the attack usually subsides. Physical examination of these cases shows considerable dilatation, as well as hypertrophy, as manifest by physical examination and X-ray. The blood pressure is high and there is usually evidence of nephritis or arterio-sclerosis. The cases of so-called paroxysmal pulmonary edema and cardiac asthma should fall in this group. Under this group it is well to note that a sudden drop in blood pressure indicated impending failure. I recall one patient with hypertensive heart disease whom I had observed for some years. She complained of dizziness, and, on examination, a pressure ranging as a rule around 200 systolic had dropped to 140. There was no increase in the pulse rate and no evidence of crepitations in the chest. Thirty-six hours later she developed acute congestive failure with pulmonary edema.

IV. Type secondary to thyrotoxicosis—There are no characteristic symptoms of thyrotoxic heart disease. The early cardiovascular symptoms of thyrotoxicosis itself are due to tachycardia and effort syndrome. They are chiefly dyspnea and palpitation and occasionally heart ache. If failure or auricular fibrillation supervenes these symptoms increase.

Increased heart action both in rate and force is the most common cardiovascular sign in thyrotoxicosis. Enlargement of the heart, arrhythmia and congestive failure, when they occur, manifest themselves in the usual way. In almost 80 per cent of cases of thyrotoxicosis the heart rhythm is normal and the pulse rate is fast, averaging from 100 to 120 per minute at rest. Rare cases may have a normal or only slightly elevated rate. The remaining 20 per cent have a disturbed rhythm—almost invariably auricular fibrillation. The systolic blood pressure is usually somewhat elevated in thyrotoxicosis, while the diastolic pressure remains at a normal or somewhat decreased level. Thus the pulse pressure is usually increased. The important point in this group is to recognize the thyrotoxicosis. Prompt institution of therapy for this condition prevents the development of cardiac damage, and in cases where advanced damage has occurred proper therapy is often followed by most gratifying results.

V. Anginoid type—This type of failure is a most important one, and one which has without doubt sharply increased in the past decade. Precordial or retro-sternal pain or distress, often radiating into the shoulder, the arm, the neck, or the lips, is the outstanding symptom. The sensations may vary from a slight feeling of fullness or distress to a pain of terrible intensity, with a sense of impending death or death itself. Physical exertion or emotional stress is the activating influence in producing the pain. These symptoms may be associated with aortitis, either syphilitic or arteriosclerotic, but it is essential to remember that severe symptoms and death may occur with no demonstrable signs of heart disease. Exercise is the acid test, and increasing sensitiveness to exertion, be it muscular or psychic, is its chief characteristic. We must be constantly on the alert for the early cases and go carefully into the history of all precordial pain. "Pseudo-angina pectoris" is an unfortunate term and deserves to be discarded. Nearly every case of heart cramp is real and not functional.

In this group fall the cases of coronary thrombosis. The chief symptom is severe, agonizing, almost uncontrollable pain. The distribution is much the same as in angina pectoris, though at times its

distribution may suggest abdominal crisis. The signs are weak and barely palpable pulse, enfeebled heart sounds, marked fall in the blood pressure, slight fever, leucocytosis and the development of a pericardial friction rub. The electrocardiographic signs are usually characteristic.

VI. Digitalis resistant type—This type is added for reason of the fact that, clinically, the cases falling into this group present one of the greatest problems in cardiology. These cases must have another factor besides decompensation, possible reinfection of the endocardium, or the presence of unsuspected disease elsewhere in the body. Splenic enlargement is often present, suggesting bacterial activity. The pulse continues rapid in spite of digitalis, and it is this rapidity of the pulse that differentiates them from the chronic edematous type with slow pulse.

SUMMARY

A general discussion of the symptoms and signs of heart failure has been presented. An attempt to classify and discuss certain clinical types has been made. The essential point to be made is that early recognition of these signs and symptoms before marked cardiac damage has occurred offers the best means of instituting therapy that may prove beneficial.

Medical Arts Building.

CALCIUM ORTHO-IODOXYBENZOATE IN THE TREATMENT OF ARTHRITIS.

THOMAS WHEELDON, M. D.,
Richmond, Va.

Salts of o-iodoxybenzoic acid have been used clinically in the treatment of arthritis since 1926[1] and the oral administration of calcium ortho-iodoxybenzoate has rapidly become the choice of the medical profession.

In an investigation of 282 cases in the past two years calcium ortho-iodoxybenzoate has been used as a part of the routine treatment. Two hundred and thirty-six cases (Group I) were studied in the usual clinical manner, while forty-six cases (Group II) were analysed with full laboratory findings. Roughly, Group I corresponds to the arthritic cases treated by the general practitioner in the usual manner, while Group II gives an accurate measure of the value of the drug where the treatment was carried out uninterruptedly and with the full cooperation of the patient.

Calcium ortho-iodoxybenzoate was chosen because it held out definite promise of curative results, and also because it was safe for country clinic patients to use between visits. It has not been known to cause addiction or to produce allergic manifestations or hepatic damage such as is often seen after the continued use of cinchophen and other quinoline derivatives. In the whole series less than 3 per cent of those treated complained of any gastro-intestinal disturbances.

METHOD OF TREATMENT

A standard treatment is used in all cases. Foci were removed when discoverable. Exercises and apparatus to improve body mechanics, checking of constipation, proper diet, and local treatment of affected joints were employed. Occasionally arthritis vaccine and thyroid were given. Although a few cases received small doses of sodium salicylate and potassium iodide, the majority received only calcium ortho-iodoxybenzoate,* two grams (four ½ gram tablets) daily. No real improvement or lasting effect should be expected in less than thirty days. The patients who cooperated best were the most benefited.

Group I (General Study).—Two hundred and thirty-six cases of arthritis complicated by general orthopedic conditions—faulty posture, deformities of feet and joints, muscle and tendon contractions, etc., and varying degrees of ankylosis. The previous treatment had been varied.

Results:

Improvement	*Number*	*Percentage*
Marked to excellent	116	50%
Fair to good	86	36%
Slight to none	34	14%

*This was obtained from the Smith, Kline and French Laboratories under the name of Oxo-ate "B."

Group II (Special Study).—Forty-six patients were studied with laboratory records which included an X-ray study of left hand, left knee and most seriously involved joint.

These cases were divided into two groups:

Hypertrophic (degenerative) arthritis: thirty-two —70 per cent.

Atrophic (proliferative) arthritis: fourteen—30 per cent.

Results:

Improvement	*Number*	*Percentage*
Good to excellent	41	89%
Fair to slight	2	4.3%
None	3	6.7%

Some of the results were startling—patients who had been chronic sufferers for years were restored to useful activity, employment or housework. There was an improvement noted in hypertensive and heart conditions. These patients were very carefully controlled and the degree of improvement was measured by comparison with a similar group of patients who did not receive calcium ortho-iodoxybenzoate.

Improvement included reduced swelling, as shown by actual measurement of the affected joints—the range of motion was enlarged and the general well-being enhanced. Where intense discomfort is present, calcium ortho-iodoxybenzoate may be administered conjointly with salicylates or other analgesic drugs.

In no case was there X-ray evidence that the joint changes characteristic of atrophic or hypertrophic arthritis had progressed while the patient was under treatment. The sedimentation rate remained stationary or decreased—evidence of systemic improvement. There was a fairly constant lowering of high blood pressure and a material increase in indican output. The writer suggests a frequent examination for indican in the urine. He finds that the amount of indican in the urine apparently gives a fair clinical index of the report on improvement that an examination will show.

Action in the Body.—Detailed pharmacological studies would be necessary before any exact explanation could be given for the physiological effect of o-iodoxybenzoic acid in the body. Pemberton[2] describes its action as that of a "glorified salicylate." Tabern,[3] however, feels that it is beneficial in arthritis because of its definite bactericidal action in the blood stream and because it stimulates leukocytosis and aids antibody formation. He states that o-iodoxybenzoic acid and its salts strikingly increase the permeability of membranes and increase lymph flow 400 per cent.

Without wishing altogether to take exception to the above, the writer would advance the theory that calcium ortho-iodoxybenzoate achieves its beneficial results through stimulating the peripheral circulation. A group of patients comprising Buerger's disease, varicose leg ulcers, and ulceration of the leg from faulty circulation in acute anterior poliomyelitis was used as a means of measuring possible circulatory improvement. The results were so striking that one cannot but conclude that it is by this means (i. e., stimulation of peripheral circulation) that the arthritic patient is improved. Even now, without the more definite data which the writer intends to publish as soon as possible, one can say that, subjectively at least, calcium ortho-iodoxybenzoate improves circulation in the affected joints.

CONCLUSIONS

1. The beneficial effect of calcium ortho-iodoxybenzoate in a general group of 236 cases has been studied over a two-year period.
2. A more detailed study of forty-six cases of hypertrophic and atrophic arthritis is presented.
3. The therapeutic results were most satisfactory, and unpleasant side reactions were negligible.
4. Laboratory findings indicate an increase in indican output, improvement in hypertension, and lowering of sedimentation rate.
5. A theory is advanced as to the physiological action of calcium ortho-iodoxybenzoate in improving peripheral circulation.

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3. Tabern: Clinical Medicine and Surgery, Vol. 35, No. 10, 1928.

318 West Franklin Street.

Proceedings of the Medical Society of Virginia

MINUTES OF THE SIXTY-FIFTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF VIRGINIA

Alexandria, Virginia
October 9, 10, 11, 1934

GENERAL SESSION

Tuesday Evening, October 9

The opening general session of the Medical Society of Virginia's sixty-fifth annual convention was held in the auditorium of the Elks' Hall, Alexandria, on Tuesday evening, October 9, 1934, and was called to order at 8:15 o'clock by Dr. S. B. Moore, of Alexandria, Chairman of the Committee on Arrangements.

The Reverend E. V. Regester, D. D., Alexandria, said the invocation.

The Society was welcomed to Alexandria in addresses by Honorable E. C. Davison, the Mayor, and Dr. S. B. Moore, Chairman of the Committee on Arrangements, the latter referring, in his address, to some of the many historical personages and events connected with the city.

Dr. Moore then presented the President, Dr. Robley Dunglison Bates, Newtown, and Dr. Bates read his President's Address, entitled "Medicine: An Art and A Science."

Dr. Isaac Peirce, a member of the Committee on Membership, read the names of members who had died within the last year, as follows, the audience standing for a moment in respect to their memory:

List of Members of the Society Whose Deaths Have Been Reported Since the 1933 Meeting

Dr. Benjamin Franklin Iden, Manassas, Va., September 22, 1933.
Dr. Arthur Wellington Rusmiselle, Washington, D. C., October 3, 1933.
Dr. Leon O. Vaughan, Waverly, Va., November 26, 1933.
Dr. Zeb Vance Sherrill, Marion, Va., December 11, 1933.
Dr. Edwin Lawrence Kendig, Victoria, Va., January 15, 1934.
Dr. Allan Moore Kimbrough, Norfolk, Va., January 15, 1934.
Dr. John Walker Carter Jones, Newport News, Va., February 9, 1934.
Dr. George D. White, Roanoke, Va., Date unknown.
Dr. Sydney Sheppard Kellam, Belle Haven, Va., December 12, 1933.
Dr. George Bright Young, Charlottesville, Va., February 13, 1934.
Dr. Harry Wilson Porter, Louisa, Va., February 20, 1934.
Dr. Benjamin Hallowell Swain, Ballston, Va., January 28, 1934.
Dr. William Latane Varn, South Hill, Va., March 21, 1934.
Dr. Robert Daniel Tucker, Powhatan, Va., March 13, 1934.
Dr. William Penn Reese, Taylor's Store, Va., February 22, 1934.
Dr. Clarence Hyde Saunders, Chase City, Va., March 14, 1934.
Dr. Calvin Hawthorne Childress, Norfolk, Va., April 1, 1934.
Dr. Albert Asa Cannaday, Roanoke, Va., February 22, 1934.
Dr. John Marsham Ropp, Roanoke, Va., April 29, 1934.
Dr. George Paul LaRoque, Richmond, Va., May 16, 1934.
Dr. William Francis Cooper, Newport News, Va., May 20, 1934.
Dr. Wyatt S. Beazley, Sr., Richmond, Va., June 6, 1934.
Dr. Chester A. Amos, Alexandria, Va., June 10, 1934.
Dr. Walter Edward Beattie, Alexandria, Va., June 9, 1934.
Dr. Robert Lee Wilkins, Alexandria, June 10, 1934.
Dr. Isaac Errett Wolfe, Coeburn, Va., June 20, 1934.
Dr. William Blount Barham, Big Stone Gap, Va., April 24, 1934.
Dr. Montgomery Thomas McCulloch, Elkton, Va., July 14, 1934.
Dr. Francis Thomas Ridley, Bluefield, W. Va., July 20, 1934.
Dr. Henry Watkins Anderson, Covington, Va., September 4, 1934.

The President announced that Dr. Harvey B. Stone, of Baltimore, who had been invited to make the principal address of the evening, was unable to attend on account of illness but had sent his paper to Dr. Frank S. Johns, by whom it would be read. Dr. Johns then read Dr. Stone's paper, entitled "The General Practitioner's Interest in Rectal Diseases."

President Bates stated that it would be necessary to take up at this time the matter of ratification of the amendments to the Constitution which had been adopted by the House of Delegates at its session on Tuesday afternoon. On motion, duly seconded, the action of the Council in adopting the amendments was ratified.

The Society then adjourned, at nine-forty P. M.

SCIENTIFIC SESSIONS

Wednesday, October 10

Medical Section

The Medical Section of the Medical Society of Virginia met in the auditorium of the Westminister Building of the Second Presbyterian Church, Alexandria, on Wed-

nesday morning, October 10, 1934, with President R. D. Bates presiding, beginning at nine o'clock.

Dr. Harry Walker, Richmond, read his paper entitled "The Treatment of Obesity," which was discussed by Dr. William B. Porter, of Richmond.

Dr. J. Morrison Hutcheson, Richmond, read his paper on "Medicolegal Aspects of Apoplexy," which was discussed by Dr. Beverley R. Tucker, Richmond.

Dr. Frank A. Strickler, University, read his paper entitled "A Study of Convulsive Disorders at the University of Virginia Hospital since 1920," which was discussed by Drs. Frank H. Redwood, Norfolk; and D. C. Wilson, University.

Dr. T. Dewey Davis, Richmond, read his paper on "The Irritable Colon: A Common Condition, Commonly Misunderstood," which was discussed by Drs. Oscar L. Hite, Richmond; J. W. Hunter, Norfolk; and Beverley R. Tucker, Richmond; and by Dr. Davis in closing.

Dr. Regena C. Beck, Richmond, read her paper on "Drug Idiosyncrasy and Neutropenia," which was discussed by Dr. Harvey B. Haag, Richmond.

Dr. D. G. Chapman, Richmond, read his paper entitled "Total Thyroidectomy for Chronic Heart Failure," which was discussed by Drs. Kinloch Nelson, Richmond; William B. Porter, Richmond; Edmund Horgan, Washington, D. C.; J. Morrison Hutcheson, Richmond; James A. Lyon, Washington, D. C.; Edmund Horgan, Washington; by Dr. Porter and Dr. Lyon again; and by Dr. Chapman in closing.

Dr. H. B. Mulholland, University, read his paper entitled "Clinical Study of Rocky Mountain Spotted Fever, Eastern Type," which was discussed by Drs. S. D. Blackford, University; W. L. Powell, Roanoke; L. M. Mason, Washington, D. C.; and Dr. Mulholland in closing.

The program having been completed, the morning session adjourned at 12:45 P. M.

Surgical Section

The Surgical Section of the Medical Society of Virginia, held in the Young People's Building, Alexandria, convened at nine-thirty o'clock, with Dr. Hugh H. Trout, vice-president, presiding.

The first paper on the program was by Dr. J. Coleman Motley, Abingdon, his subject being "Wandering Spleen with Torsion of Its Predicle: Report of a Case." This was discussed by Drs. Frank S. Johns, Richmond; James W. Hunter, Norfolk, A. S. Brinkley, Richmond; and Dr. Hunter again.

Dr. R. DuVal Jones, Jr., Norfolk, read his paper on "Leiomyoma of the Gastro-Intestinal Tract with Presentation of Two Cases," which was discussed by Drs. Carrington Williams and Charles R. Robins, both of Richmond, and in closing by Dr. Jones.

The next paper was by Dr. Charles R. Robins, Richmond, his subject being "The Cure of Direct Inguinal Hernia." Discussion was by Drs. R. DuVal Jones, Norfolk; Carrington Williams, Richmond; J. Shelton Horsley, Richmond; and in closing by Dr. Robins.

The paper by Drs. C. C. Coleman and W. G. Crutchfield, Richmond, was read by Dr. Coleman, the subject being "Further Observations in the Treatment of Acute Head Injuries." This was discussed by Dr. Herbert Jones, Petersburg; and Dr. Coleman, in closing.

Dr. J. M. Emmett, Clifton Forge, read his paper entitled "Fifteen Hundred Spinal Anesthesias with Special Reference to Indications, Complications and Mortality," which was discussed by Dr. I. A. Bigger, Richmond; Dr. Herbert H. Schoenfeld, Washington; Dr. Frank S. Johns, Richmond; and in closing by Dr. Emmett.

Dr. Guy W. Horsley, Richmond, read his paper on "Surgical Treatment of 183 Consecutive Thyroid Cases with No Mortality," which was discussed by Drs. C. Bruce Morton, University; Stuart McGuire, Richmond; Linwood Keyser, Roanoke; and J. Shelton Horsley, Richmond.

The paper by Drs. Charles S. White and J. Lloyd Collins, Washington, was presented by Dr. White with motion pictures, their subject being "Evipal Anesthesia."

The Surgical Section adjourned at 12:40 A. M.

Wednesday Afternoon

General Session

The Medical Society of Virginia met in the auditorium of the Westminister Building and was called to order at 3:15 P. M. by President Bates.

Dr. John S. Weitzel, Richmond, read his paper on "Problems in Breast Feeding," which was discussed by Dr. Thomas D. Jones, Richmond.

Dr. H. J. Warthen, Richmond, read his paper entitled "Gas Bacillus Infections; A Study of the Incidence, Treatment, and Mortality," which was discussed by Dr. H. B. Holsinger, Farmville.

The following papers were read as a Symposium on Medical Economics:

"Medical Education, Specialization, and the Private Practitioner"—Dr. J. C. Flippin, University.

"Sickness Insurance"—Dr. Walter B. Martin, Norfolk.

"Federal, State, County, and Municipal Relations to Medicine and the Care of the Indigent Sick"—by Dr. I. C. Riggin, State Health Commissioner, Richmond.

"General View of the Whole Program"—Edgar Sydenstricker, Director, Public Health Activities, Milbank Memorial Fund (invited guest).

In calling for Dr. Riggin's paper, the President took this occasion to formally introduce him to the audience as the new State Health Commissioner.

The papers constituting the symposium were discussed by Drs. W. L. Powell, Roanoke; J. Shelton Horsley, Richmond; R. L. Raiford, Franklin; and G. F. Simpson, Purcellville.

The program having been completed, the afternoon session adjourned at 5:45 P. M.

Wednesday Evening Session

The Society convened in the auditorium of the Westminister Building, Dr. James K. Hall, Vice-President, Richmond, presiding, and was called to order at 8:15 P. M.

Dr. M. H. Todd, Norfolk, read his paper on "Colles' Fracture," which was discussed by Dr. H. Page Mauck, Richmond, and by Dr. Todd in closing.

Vice-President Hall announced the receipt of a telegram from Dr. J. H. Hiden, of Pungoteague, stating that he was unable to be present on account of illness. (Dr. Hiden was to read a paper entitled "Experience with an Efficient Method of Operation for Hemorrhoids, Adapted to General Practice in Rural Districts.")

Dr. Joseph F. Geisinger, Richmond, read his paper on "The Cystic Kidney," which was discussed by Drs. Linwood D. Keyser, Roanoke, and A. I. Dodson, Richmond.

The evening session then adjourned at 9:15 P. M.

Thursday, October 11

The Society met in the auditorium of the Westminister Building with the President presidng and was called to order at 9:10 A. M.

Dr. James P. Baker, Jr., Richmond, read his paper entitled "Anemias Dependent Upon Food Deficiencies," which was discussed by Drs. William H. Higgins, Richmond; J. S. DeJarnette, Staunton; again by Dr. Higgins; by Dr. R. H. Manson, McKenny; again by Dr. Higgins; and by Drs. J. Shelton Horsley, Richmond; Greer Baughman, Richmond; and by Dr. Baker, in closing.

Dr. H. Hudnall Ware, Jr., Richmond, read his paper on "Some Extra-uterine Complications of Pregnancy," which was discussed by Drs. Greer Baughman, Richmond; L. M. Mason, Washington, D. C.; Joseph Bear, Richmond; and by Dr. Ware in closing.

The paper of Drs. J. Edwin Wood, Jr., George D. Capaccio, and William Weaver, of University, entitled "Venous Pressure and Body Weight Determinations in Congestive Heart Failure" was presented by Dr. Wood and was discussed by Drs. Alex. F. Robertson, Jr., of Staunton; Walter B. Martin, Norfolk; J. S. DeJarnette, Staunton; by Dr. Martin again; by Dr. T. H. Daniel, Charlottesville; and by Dr. Wood, in closing.

Dr. Claude Moore, Washington, read his paper entitled "Pathological Lesions Correctly Diagnosed by Roentgenologic Methods and Later Missed at Surgical Exploration," which was discussed by Dr. Wright Clarkson, Petersburg.

The paper of Drs. Thomas D. Walker, Jr., and W. W. Falkener, of Newport News, and J. Shelton Horsley, Richmond, entitled "Vomiting in the New Born, with Special Reference to Duodenal Atresia: Report of Two Cases," was read by Dr. Walker and was discussed by Dr. Horsley, and by Dr. Walker in closing.

The paper of Drs. J. B. Nicholls and L. R. Broome, Catawba Sanatorium, on "Collapse Therapy in Pulmonary Tuberculosis" was read by Dr. Nicholls and was discussed by Drs. E. C. Drash, University; C. P. Cake, Washington; Dean B. Cole, Richmond; W. E. Brown, Blue Ridge Sanatorium; and by Dr. Nicholls in closing.

The report of the House of Deleagtes was read by Miss Agnes V. Edwards, the Secretary, and, on motion, was received and adopted.

President Bates spoke of the necessity of electing a councilor from the Seventh District, in which there is a vacancy due to the redistricting of the State, and asked the members of the Society in that District to decide upon and recommend to the incoming President the appointment of one of their number as Councilor.

PRESIDENT BATES: Dr. Francis H. Smith, of Abingdon, who is your President-Elect, needs no introduction to you. I ask Dr. Smith to come forward now. (Dr. Smith came to the platform.)

Dr. Smith, I take great pleasure in handing over to you this gavel, and I do it with the assurance that I turn it over to a man who knows how to use it and who will do it.

DR. FRANCIS H. SMITH: Mr. President and gentlemen: I appreciate more deeply than any words can express what you know and what I realize is the highest honor to come to any physician in the State of Virginia. At the same time, I am not going to let a feeling of responsibility weigh too heavily on my shoulders, and I expect to enjoy this next year of service. I say, without any feeling of irreverence, that I am among you as one who serves, and I expect to carry out that motto in this next year.

Is there any further business to come up? (No response.) None appearing, a motion to adjourn is in order.

(A motion to adjourn was offered and seconded.)

PRESIDENT SMITH: I declare the Sixty-fifth Annual Session of the Medical Society of Virginia adjourned.

The Society adjourned *sine die* at 12:40 P. M., Thursday, October 11, 1934.

BUSINESS SESSIONS

Council

The Council of the Medical Society of Virginia met in the George Mason Hotel, Alexandria, Va., October 9th, at 11:00 A. M.

The President, Dr. R. D. Bates, presided. Others present were Dr. F. H. Smith, president-elect, and the following councilors: Drs. Griffin W. Holland, P. St. L. Moncure, Roshier W. Miller, Wright Clarkson, J. T. McKinney, Percy Harris, J. E. Knight, C. B. Bowyer, and J. M. Emmett, and Miss Agnes Edwards, Secretary. Dr. E. H. Miller sent a wire, regretting his inabilty to be present.

The minutes of the mid-winter meeting, as printed on pages 405-6 of the October, 1934, issue of the MONTHLY, were approved.

The budget, prepared by Drs. Wright Clarkson and Roshier W. Miller, was presented. Dr. Clarkson stated that the Society had been exceeding its income very greatly in the past few years and asked the support of the Council in adhering to the budget. Dr. Smith asked about the appropriation for the Department of Clinical Education and said the Department had asked for $500.00 and felt that was the smallest amount with which they could accomplish work they had planned. After discussion, Dr. Harris moved that the Council accept the budget as presented. This was seconded by Dr. McKinney. Dr. Bowyer said that clinics had been put on by the State Societies in North Carolina and Tennessee, he thought, with Federal aid and asked if it was possible that this could be done in Virginia. The idea was ex-

pressed that this work was possibly done with aid from some fund like the Commonwealth Fund which has helped our Society. The budget was then accepted as presented, Dr. Smith opposing it on account of the amount allotted the Department of Clinical Education.

Dr. Clarkson said that we might need additional money for operating expenses between now and the first of the year, and he moved that the secretary-treasurer be authorized to borrow on our present bonds, rather than sell them, for such amount as might be needed for the next few months. This was seconded and carried.

Dr. Bates said that he would not call for reports from individual councilors but would be glad to hear from any councilor who had any matter to bring to the attention of the Council.

Dr. Knight read a letter he had received from doctors in Orange County, stating that they wished to secure a charter in the name of the Orange County Medical Society. It was moved, seconded and carried that a charter be granted this society.

Dr. Emmett felt that we could increase our revenue if we could induce all members of local societies to join the State Society. After discussion, Dr. McKinney moved that Dr. R. W. Miller be appointed to present to the House of Delegates a statement as to our financial condition and urge delegates to stimulate interest in the State Society by trying to get all members of local societies to join the State Society. This was seconded and carried.

The secretary stated that newspaper men had asked if they could secure some of the papers to be read at the general sessions for the purpose of publishing extracts from them in their newspapers. It was the opinion of the Council that they could sit in meetings and take their own notes but could not be furnished papers as it was contrary to the principles of the Society.

There was next a discussion of whether a Councilor has the right to vote in the House of Delegates. It was stated that the words *"ex officio"* mean by virtue of office and according to Robert's Rules of Order they were allowed a vote. In order to avoid confusion in this matter, however, the President ruled that at this meeting the Councilors should have a vote in the House of Delegates.

A statement was made that the last General Assembly had re-districted the State into nine districts instead of ten as heretofore and this would mean that we would lose a councilor. It was moved that the status of the Council as to old Congressional Districts should stand during this meeting but that the new Council be elected in accordance with the nine congressional districts. Seconded and carried.

There being no further business, the meeting adjourned.

AGNES V. EDWARDS, *Secretary.*

House of Delegates

The first meeting of the House of Delegates was held in the Young People's Building, Alexandria, Va., October 9th, at 2:25 P. M., with the president, Dr. R. D. Bates, presiding.

Roll call showed a quorum present.

The minutes of the last meeting, as printed in the December, 1933 issue of the MONTHLY, were approved.

The budget, as approved by the Council, was read by the secretary, and Dr. R. W. Miller, a councilor and also a member of the budget committee, explained why certain appropriations had been made and stated that it was necessary that the Society live within this budget. It was moved, seconded and carried that the budget, as presented, be accepted.

Dr. Miller then urged the delegates to endeavor to increase membership in the State Society by trying to get those who were members of their local societies and not members of the State Society to join. The Council recommended that the first year's dues for the State Society might be collected by the local society and forwarded to the State Society office. Dr. C. L. Harrell moved that all delegates be instructed as to this recommendation and that if possible a fee of $5.00 for membership in the State Society be sent in with application for membership in local societies. This was seconded and carried.

Auditor's Report—October 1, 1933, Through September 30, 1934

TO THE OFFICERS AND COUNCILORS,
MEDICAL SOCIETY OF VIRGINIA,
RICHMOND, VIRGINIA.

GENTLEMEN:

We have made an examination of the books of account of the MEDICAL SOCIETY OF VIRGINIA, RICHMOND, VIRGINIA, for the fiscal year ended September 30, 1934, and submit herewith our report, consisting of the following financial statements and related comments:

EXHIBITS

"A" Balance Sheet.

"B" Cash Receipts and Disbursements.

Comments

A summary of the financial condition of the Society at September 30, 1934, compared with a similar tabulation as of September 30, 1933, shows:

	9-30-34	9-30-33	Decrease
Cash	$ 910.07	$ 1,699.95	$ 789.88
Accounts Receivable	2,880.75	3,250.00	369.25
Investments—Bonds (At Par)	2,250.00	5,950.00	3,700.00
Total Assets	$ 6,040.82	$10,899.95	$4,859.13
Less: Accounts Payable	1,002.49	476.39	526.10*
Net worth	$ 5,038.33	$10,423.56	$5,385.23

*Increase.

The cash receipts and disbursements for the current year are set forth in EXHIBIT "B" and are briefly summarized below:

Receipts—Income	$13,572.43
Receipts—Non-Income (Bonds)	3,773.97
Total Receipts	$ 17,346.40
Disbursements—Expenses	18,136.28
Disbursements in excess of receipts	$ 789.88
Cash balance beginning of year	1,699.95
Cash balance end of year	$ 910.07

As may be seen from the foregoing tabulation, the receipts representing INCOME for the current year were only $13,572.43, while disbursements for EXPENSES aggregated $18,136.28, resulting in an operating deficit for the year of $4,563.85. During the year $3,500.00 of the liberty bonds held at the beginning of the year were sold to meet current obligations and liquidating dividends totaling $200.00 were received on mortgage bonds owned. After giving effect to these non-income receipts, the cash balance at the end of the year was $789.88 less than at October 1, 1933. Our report for the prior year showed an operating deficit of $4,484.67.

We would recommend that the Society give careful consideration to the amount of income that will be available to meet 1934-35 expenses before making appropriations for that year.

We checked in detail the cash receipts and disbursements of record and established by direct communication with the First & Merchants National Bank, Richmond, Virginia, the funds on deposit. Securities owned, as listed on the balance sheet, were verified by inspection.

The amounts owing by members for dues, and accounts due for advertising in and subscriptions to the MEDICAL MONTHLY are shown at collectable values, as estimated by the Secretary-Treasurer. No attempt was made to verify these by direct communication with debtors. The Secretary-Treasurer stated that there were no outstanding liabilities at September 30, 1934, other than those shown on the Balance Sheet.

Insurance protection in force consists of—

Fire—Office Furniture and Fixtures	$1,000.00
Fidelity Bond—Secretary-Treasurer	3,000.00
Fire—Walter Reed Home, Belroi, Va.	1,000.00

Respectfully submitted,

A. M. PULLEN & Co.,

Certified Public Accountants.

Balance Sheet—September 30, 1934

Exhibit "A"

ASSETS

CASH (EXHIBIT "B"):		
On Deposit—First & Merchants National Bank:		
Checking Account	$ 559.07	
Savings Account	351.00	
		$ 910.07
DUE FROM MEMBERS: (Estimated Collectible Value)		
1934 Annual Dues—400 @ $5.00 each		2,000.00
ACCOUNTS RECEIVABLE:		
VIRGINIA MEDICAL MONTHLY:		
For advertising	$ 830.75	
For subscriptions	50.00	
		880.75
SECURITIES OWNED:		
Fourth U. S. Liberty Loan Bonds, 4¼% (1938)	$1,500.00	
Collateral Trust Bonds (At Par)	$1,000.00	
Less: Liquidating Dividends	250.00	750.00
		2,250.00
Total Assets		$6,040.82

LIABILITIES

ACCOUNTS PAYABLE:		
For preparation of Medical Journal	$ 502.49	
For attorney fee	500.00	
		$1,002.49
SURPLUS:		
Excess of Assets over Liabilities		5,038.33
Total Liabilities and Surplus		$6,040.82

Cash Receipts and Disbursements
For Year Ending September 30, 1934
Exhibit "B"

RECEIPTS

MEDICAL SOCIETY OF VIRGINIA:		
Dues—Members	$4,527.11	
Interest on Securities and Savings Account (one-half)	134.52	
Old Outstanding Checks Dropped	3.00	
Refund of Unused Appropriation by Department of Clinical Edution (1933)	7.50	
Sales—3rd Volume on History of Medicine	256.50	
		$ 4,928.63
VIRGINIA MEDICAL MONTHLY:		
Advertising	$5,095.77	
Subscriptions:		
Members $3,018.08		
Non-members 395.43		
	3,413.51	
Interest on Securities and Savings Account (one-half)	134.52	
		8,643.80
Total Receipts (Income)		$13,572.43
REALIZATION FROM ASSETS HELD AT OCTOBER 1, 1933:		
Sale of U. S. Liberty Bonds (Par $3,500.00)	$3,573.97	
Liquidating Dividends on Mortgage Bonds	200.00	
	3,773.97	
Total Receipts		$17,346.40
CASH BALANCE—OCTOBER 1, 1933		1,699.95
		$19,046.35

DISBURSEMENTS

MEDICAL SOCIETY OF VIRGINIA:		
Salaries (Apportioned):		
Secretary-Treasurer $1,620.00		
Clerical Assistance 660.00		
	$2,280.00	
Rent and Telephone	344.01	
Stationery and Office Supplies	79.94	
Postage	252.72	
Reporting Annual Meeting	166.25	
Officers', Councilors' and Committeemen's Expense	49.53	
Badges	32.40	
Programs	56.00	
Repairs and Replacements—Office Equipment	18.50	
Audit Fee (Apportioned)	30.00	
President's Expenses	25.00	
Invited Guests' Expense	15.00	
Cost of Publishing Third Volume on History of Medicine	2,250.00	
Attorney Fee	500.00	
Miscellaneous Expenses	22.77	
Department of Clinical Education	1,457.07	
Committee on Scientific Work and Clinics	47.07	
Committee on Legislation (Net)	325.00	
		$ 7,951.26
VIRGINIA MEDICAL MONTHLY:		
Salaries (Apportioned):		
Secretary-Treasurer $1,620.00		
Clerical Assistance 660.00		
	$2,280.00	
Preparing of Journal (including cost of distribution)	5,960.67	
Rent and Telephone	340.93	
Repairs and Replacements—Office Equipment	18.50	
Stationery and Office Supplies	33.95	
Office Postage	48.90	
Audit Fee (Apportioned)	30.00	
Miscellaneous Expenses	13.73	
		8,726.68
SPECIAL APPROPRIATION:		
Committee on Prenatal and Postnatal Instruction	$5,559.46	
Less: From Commonwealth Fund	4,101.12	
		1,458.34
Total Disbursements (For Expenses)		$18,136.28
Other Disbursements		None
Total Disbursements		$18,136.28
CASH BALANCE—SEPTEMBER 30, 1934 (Exhibit "A")		910.07
		$19,046.35

The next order of business was reports of committees as published in the October, 1934, issue of the MONTHLY. As it was stated that the report of the COMMITTEE ON REVISION OF THE CONSTITUTION AND BY-LAWS would have to lay on the table for a day, this report was taken out of order and called for at this time, being presented by the Chairman, Dr. P. St. L. Moncure. Dr. C. H. Peterson moved that the Constitution as amended be adopted as a whole. This was seconded and carried, and Dr. Lewis Holladay moved that the amendments to the By-Laws be accepted, with final action to be taken the following day. Seconded and carried.

A recess was then given for the delegates from the various districts to get together and select a Nominating Committee. The following were named:

1st District—Dr. Griffin W. Holland.
2nd District—Dr. W. B. Martin.
3rd District—Dr. F. P. Fletcher.
4th District—Dr. C. E. Martin.
5th District—Dr. I. C. Harrison.
6th District—Dr. W. L. Powell.
7th District—Dr. K. F. Maxcy.
8th District—Dr. J. A. Gibson.
9th District—Dr. Isaac Peirce.
10th District—Dr. J. M. Emmett.

In the Report on GROUP SOCIETIES, the chairman, Dr. Southgate Leigh, read a portion of a letter that had been sent out by his committee. Dr. Moncure moved the adoption of the report as published (pages 414-15). Dr. Clarkson commended the work of Dr. Leigh and his committee and moved that we not only adopt the report but give him a rising vote of thanks. Seconded and carried. Dr. C. O. Dearmont moved that $100.00 be given Dr. Leigh for his expenses for the coming year. Seconded but motion was ruled out of order as budget had been adopted. As the report of Dr. Leigh's committee carried a request for an appropriation, it was moved that the House rescind the motion of the adoption of this report. This was seconded and carried and motion was made that the report be accepted, omitting the clause referring to an appropriation. Seconded and carried. Dr. W. B. Martin moved that the House of Delegates recommend to the budget committee that they find out about Dr. Leigh's expenses and take this into consideration at the next meeting of the committee and reimburse him if possible next year. Seconded. Dr. J. T. McKinney felt this was a bad policy because there were many chairmen of committees who spend their personal money and Dr. Moncure felt that the Society would be setting a bad precedent to do this for any committee. The motion being put to vote was lost.

SCIENTIFIC WORK AND CLINICS (page 407)—Dr. Carrington Williams moved that this report be adopted with the recommendation that only the appropriation as allowed in the budget be given the committee. Seconded and carried.

PUBLICATION AND PROGRAM (page 409)—It was moved that this be accepted. Seconded and carried.

MEDICAL EDUCATION AND HOSPITALS (pages 409-10)—Dr. J. W. Preston, chairman, read the recommendations which were incorporated in the report and explained the idea of the Committee with regard to these. Dr. M. B. Hiden moved adoption of this report. Seconded and carried.

MEMBERSHIP (page 410)—Adopted.

LEGISLATIVE COMMITTEE (pages 407-9)—Accepted. Dr. G. F. Simpson moved that a rising vote of thanks be given Dr. Clarkson, chairman, for his work. Carried.

WALTER REED COMMISSION (page 410)—Adopted.

MATERNAL WELFARE (pages 410-11)—Accepted.

CHILD WELFARE (page 411)—Accepted.

DEPARTMENT OF CLINICAL EDUCATION (pages 411-14)—Dr. Carrington Williams moved the adoption of this report except that the appropriation be in conformity with the adopted budget. Seconded and carried. Dr. Kinloch Nelson moved that the secretary be instructed to write the Commonwealth Fund and Mr. Eutsler letters of appreciation. Seconded and carried.

PUBLIC RELATIONS (page 415)—Dr. I. C. Harrison, chairman, explained the action of the Committee as stated in the report with regard to fees to be charged for care of the indigent sick. Report adopted.

MILITARY AFFAIRS AND NATIONAL DEFENSE (pages 415-16)—Adopted.

TUBERCULOSIS CLINICS (page 416)—Accepted.

MENTAL HYGIENE (pages 416-17)—Adopted.

INQUIRY AS TO EFFECT OF USING IODIZED SALT (page 417)—Accepted.

ADVISORY BOARD TO WOMAN'S AUXILIARY (page 417)—Accepted.

It was moved, seconded and carried that the report of the COMMITTEE TO INVESTIGATE IRREGULAR PRACTICES AT CERTAIN STATE HOSPITALS be held over until the next meeting of the House with the hope that the chairman, Dr. J. Bolling Jones, might be present.

Dr. F. H. Smith, President-elect, felt that the Society had too many special committees and asked the House if they wished all of them continued. Dr. Harrison said that the President had power to appoint or discontinue any special committee. Dr. Simpson moved that this be considered at the next meeting of the House after members have studied the matter. Seconded and carried.

It was moved and carried that the report of the delegates to the American Medical Association be taken up at the next meeting of the House as no delegate was present.

Dr. M. B. Hiden moved that New Business also be held over until the next meeting. Seconded. Dr. J. F. Geisinger offered a substitute motion that we take up new business at this time. This was seconded and carried.

Dr. C. L. Harrell moved that the Society go on record as opposing giving free information regarding patients to life insurance companies and recommended that a fee be charged in accident indemnity cases. Dr. J. L. Rawls felt that this would be bad for the patient because if the doctor refused to give information the insurance company would feel that the patient had something wrong with him and would refuse to issue a policy. Dr. M. O. Burke said he had been paid for such information by insurance companies. Dr. I. C. Harrison stated that he was not in favor of doing work for insurance companies without

getting pay but it is hard to specify what your charge should be. Dr. Harrell cited specific cases when he sent in bills for information to insurance companies and had them refuse to pay. Dr. Simpson said he wrote insurance companies that he gave no information without pay. Dr. Hiden felt this was all right where accident insurance is concerned. The motion was put to vote and carried.

Dr. M. B. Hiden said that practically every other organization has some way to protect its members and he had written some of the delegates suggesting that we have a protective committee for the Society, especially to protect members against insurance companies and government agencies. He told of an instance of sending a bill for $50.00 for services to an insurance company and having a check sent him for only $20.00. When he questioned this payment, the company refused to pay more and he had no organization to which he could appeal. If an insurance company robs a man who belongs to a labor union, the man is protected by the union. He moved that we have a protective committee formed in this Society to advise members on these matters and to do everything in their power to get justice for individual members of the Society. The motion was seconded by Dr. Isaac Peirce and carried.

Dr. Peirce said the question of cost would have to be taken into consideration because a committee of this kind to function properly would have to have money to work with.

Dr. C. E. Martin told of a chiropractor in his town who does more practice than any doctor there. He stated that the man has some political pull and, although he was indicted for practicing medicine illegally, he got by with it. Now he is really practicing medicine though he took down the word "doctor" and calls himself a masseur.

Dr. G. F. Simpson said we have a committee on Medical Economics which should do what Dr. Hiden wishes and the chiropractor should come under the head of the Ethics Committee. Dr. Hiden did not feel that money would be necessary, but doctors should report injustices to this committee and have them worked out. The idea is to have a committee to investigate these problems and see what can be done about them. Dr. Hiden's motion being put to vote was carried.

The House then adjourned to meet at 1:00 P. M., the following day.

October 10, 1934

The second meeting of the House of Delegates convened at 1:00 o'clock, Wednesday, October 10th, in the Young People's Building, Alexandria, with the President, Dr. R. D. Bates, presiding.

A quorum being present, the first order of business was the reading of the report of the COMMITTEE TO INVESTIGATE IRREGULAR PRACTICES AT CERTAIN STATE INSTITUTIONS. This was presented by Dr. W. B. Martin, a member of the committee, as follows:

Report of Committee to Investigate Irregular Practices at Certain State Institutions

Your Committee appointed to investigate the various points of conflict between the public clinics and hospitals and the practitioners of medicine in this State desires to submit the following report. It is quite evident that such a committee, without funds at its disposal, could make no investigation on the ground. We were forced, therefore, to rely on the questionnaire method of investigation. These questionnaires were sent to the heads of the various State-supported institutions engaged in providing medical care; to the physicians associated with these institutions, and to practitioners throughout the State.

It is impossible to review in detail the information and suggestions received in response to these questionnaires, but from a consideration of the subject of our investigation certain general principles emerge.

It is conceded that the State* has a definite responsibility in the field of public health and in the care of certain types of cases, as a matter of public welfare. The proper line of cleavage between State and private practice is poorly defined and it is the existence of this twilight zone that causes so much difficulty.

The State should provide adequate hospital care for the indigent. This duty is especially definite in those cases where the general public welfare is concerned, as in the care of the tuberculous and the insane.

The State should assist in paying the hospital cost of patients on the border-line of poverty. They differ only in degree from the outright indigent. They may be able to pay part of the cost of hospital care but cannot support the entire expense. These patients should be encouraged to contribute what they can. They should not be denied hospital care on account of their inability to pay in full, nor should they be pauperized by being provided free service.

Adequate investigation of all cases receiving State aid should be made by agencies in the locality from which the patient originates, so that the interest of the State and the tax-payer may be conserved. This principle should apply to all institutions furnishing free or part free service.

Public health activities should be extended so as to provide the maximum amount of protection to all of the people through the application of the principles of preventive medicine. We believe that those measures of protection that have to be carried out on a large scale, or over a wide area, to be effective are properly a concern of the State. For example, immunization against certain communicable diseases has to reach a considerable fraction of the population before an effective barrier against the spread of infection is raised.

The State or its agents should not enter the field of medical practice nor compete on a cut-rate basis with private institutions.

Specific examples embodying these principles will make our meaning clearer. When the State establishes an institution and fixes a charge for private patients below

*The term state here refers to a unit of government whether State, municipal or county.

the cost of such service it is engaged in unfair competition with private institutions in the same field. This is particularly true if the character and amount of State aid is covered up and when the public is led to believe that the rate charged allows for a fair and reasonable profit. The operation of the private division of the Western State Hospital illustrates this point. If such items as capital cost, insurance, taxable value, depreciation and saving from free labor are included along with these other expenses, a correct estimate could be reached of the actual cost per patient day. The difference between this figure and what is actually paid by the patient represents the amount of State subsidy. This figure should be known to the tax-payers of the State. Furthermore, it is to the interest of the people of the State that private institutions for the care of those that can pay should be encouraged. It would seem a reasonable solution of the problem if patients who are entitled to it were granted the same subsidy regardless of whether they chose to be treated in a private or a public institution.

This same principle can be applied to the tuberculosis sanatoria. At present there are 760 beds in these State sanatoria. Of these 125 are free beds, all occupied, with a waiting list of 178. There are 635 pay beds, sixty-five of which are vacant. The patient who pays the regular rate in these institutions is paying only a part of the cost of his maintenance. The State and incidentally the tax-payer is paying the difference. Here again the State is competing with private institutions on a cut-rate basis. Furthermore, the State is making totally inadequate provision for the indigent group, as witness the waiting list of 178. At the same time the pay group includes many individuals who could and should pay the entire cost of their care. We believe that the State should first provide for the indigent group to the limit of its financial ability, that those who are able should pay the full cost of their care, and that the part pay group should be selected on the basis of their actual inability to pay the entire cost. The amount of the State's actual contribution to these patients should be determined and a subsidy should be granted regardless of whether the patient enters a private or a public institution. The some general care should be exerted in selecting patients for admission to general hospitals and clinics operated or supported by the State. It is important that free service or part pay service should be extended to those who actually need it. It is equally important that the interest of the tax-payer be protected by not giving such service to those who can pay. The proper working of a free hospital or clinic service must be founded on an accurate check on their intake.

The use of the facilities of public institutions in carrying on private practice is, of course, to be condemned, nor should these institutions extend service except of an emergency nature to those who are able to pay.

BE IT RESOLVED, That the Medical Society of Virginia adopt the principles set forth in the report of this committee as representing our viewpoint as to the proper relationship of the various State activities in medicine to the people and to the medical profession.

BE IT FURTHER RESOLVED, That a copy of this report and of these resolutions be published in the official journal of this Society for the information and guidance of all of our members and that the matter be now referred to the Legislative Committee.

J. BOLLING JONES, *Chairman,*
WALTER B. MARTIN,
J. E. K. FLANNAGAN.

Note.—Other members of Committee were not present when this report was signed.

Dr. Martin moved the adoption of the resolutions accompanying this report. Seconded and carried.

Dr. W. C. Akers said that certain State-supported institutions in this State admit people from various parts of the State without a thorough investigation as to whether or not they are able to pay their bills. He has in his files the names of people who are able to pay who have been to these institutions. He moved that we embody in the resolutions that the State institutions must have a certificate from the family physician or the welfare department of the county from which the patient comes before he is admitted for treatment in the institution. Dr. W. L. Powell asked about pay patients in the tuberculosis sanatoria. Dr. Martin said this was included in the report and resolutions. The agency in the county from which the patient comes should investigate all cases going to State institutions. A large number of tuberculous patients are not taken care of. The resolutions also care for this. If a patient is dependent, he should be allowed to go to a State institution or to a private sanatorium, the State paying the cost at that sanatorium. Dr. Akers asked if there was anything in the report to ask State institutions to look after these patients. Dr. Martin said their report and resolutions are intended only as the basis of a code of ethics but there is no way of enforcing them. Dr. J. T. McKinney said that in the fight in legislature last winter it was impossible to get the cooperation of the doctors of the State. If we undertake to change the situation at the T. B. sanatoria, he did not believe we would meet with success. Economic conditions throughout the State are unsettled and to attempt to change the time honored custom of sending patients to the T. B. sanatoria would certainly not increase our popularity. Dr. Percy Harris wished to know if Catawba Sanatorium investigates cases of patients who go there. He stated that this is done at Blue Ridge Sanatorium and if they do not have a certificate they are sent back. Dr. F. J. Wright stated that the T. B. sanatoria of the State are in the same category as the medical colleges and insane institutions and we should not do anything to cripple tuberculosis prevention activities. Dr. C. L. Harrell said that since the meeting last year, the State Health Department has changed its policy and no patient is admitted to T. B. sanatoria without a certificate from the family physician. Dr. J. E. K. Flannagan stated that their committee is trying to see that the indigent of the State are cared for and if the State does not take care of that class of patients it is falling

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short of its duty. This should have grave consideration in the adoption of this report. Quite a number of pay beds in State sanatoria are vacant and a lot of indigent patients are on a waiting list. We should not have vacant beds for only people who can pay. Dr. Simpson thought if we pass the resolutions, we will approach the problem in a practical manner, and will be doing something that will be constructive to the health of the State. Dr. Akers stated that he did not have in mind the tuberculosis institutions of the State. He had not been able to get a patient in one of these without making out an application for him and he felt the resolutions took care of his motion if they are carried out.

Dr. Flippin stated that he was in favor of the spirit of what had been said. At the University, when individuals write in regard to treatment, they are asked for statements from their doctors. If they desire free treatment, they are asked for a testimonial as to whether they should be admitted on a free list. He did not feel there was an adequate welfare organization in a good many of the counties and it would be quite a burden for physicians to have to endorse all patients. He said further that patients brought to the hospital in emergencies cannot be turned down. Were the rule carried out that a physician had to refer such, it would be very hard on these patients. The University would like to have every case sent in by a physician but, with conditions that exist in the State, they cannot see how it is practical at this time. Dr. Flippin said that he understood the resolution was only a recommendation and asked the institutions to cooperate with them. He thought that fair and was perfectly willing to comply with it, but felt that to lay down a rule would make it very difficult. If the patient at the T. B. sanatorium who is able to pay would pay, it would increase the number of free beds for indigent patients. Dr. J. N. DeShazo agreed with Dr. Flippin's viewpoint and said that the tax-payer who gets something generally feels like he pays for it because he pays taxes and he feels like it is fair to have something given him for them.

Dr. Martin said that the committee was not trying to pass a law but simply proposed certain principles to prevent the unfair use of State funds in the care of indigent patients. The report of the committee was then adopted.

The report of the DELEGATES TO THE A. M. A. (Pages 419-20) was next called for. It was moved, seconded and carried that this be accepted.

THE REVISION OF THE BY-LAWS (pages 417-19) was now taken up and it was moved and seconded that they be adopted as a whole. Dr. Carrington Williams offered an amendment to Article I, Section 1, to omit "and those not members of a component society but active members of this Society in good standing at the time of the adoption of these By-Laws." Dr. Simpson felt the adoption of this section with these words included would break down the county society as a unit and seconded Dr. Williams' motion. Dr. Williams' motion was put to vote and lost. The By-Laws were then adopted as originally amended.

Dr. F. H. Smith asked if he had the right to discharge special committees if he saw fit. Dr. J. A. Hodges did not feel Dr. Smith should do away with any of the special committees but only discharge them when they finished their special work. Dr. C. B. Bowyer moved that the House of Delegates discharge all special committees. Seconded. Dr. J. C. Flippin offered an amendment that they be discharged at the end of the session. Seconded and carried.

The following report was received from the Woman's Auxiliary:

Annual Report of the President of the Woman's Auxiliary to the Medical Society of Virginia

MR. PRESIDENT AND MEMBERS OF THE MEDICAL SOCIETY OF VIRGINIA:

I have the honor of presenting the Annual Report of the Woman's Auxiliary for the year ending October 1, 1934.

The principal objective of the State Auxiliary has been the organization of new county auxiliaries where the co-operation of the respective Medical Society was assured. Other State objectives have been continuing prenatal care education, advocating yearly health examinations, and carrying on various types of hospital work.

Every month reports from the county auxiliaries are published in the VIRGINIA MEDICAL MONTHLY. State news is also published in the *National Bulletin.*

Upon recommendation from the Auxiliary to the Southern Medical Association, a State chairman has been appointed for the purpose of promoting the Jane Todd Crawford Memorial project.

There are eight organized county auxiliaries and one junior auxiliary in the State. These auxiliaries include seventeen counties.

There are 231 active members. The treasurer reports 193 members have paid their dues up to date. In all of the auxiliaries many members represent the auxiliary on the boards of welfare and civic organizations in their respective communities.

Health Education has been particularly emphasized not only among auxiliary members but also in promoting health projects in other women's organizations. The Norfolk County Auxiliary has endorsed the Health Education Program of the State Superintendent of Schools. This Auxiliary has particularly emphasized yearly physical examinations and proper diet by showing moving pictures combined with lectures on these subjects before ten schools, churches and civic organizations. The Richmond Auxiliary sends out birthday cards reminding their members of their yearly health examination. At a meeting of the Auxiliary in Petersburg, a paper was read on the "Life and Career of Jane Todd Crawford." The Auxiliary to the James City and New Kent Medical Society sends out birthday cards for a yearly examination. At each meeting a health article from *Hygeia* is included in their program. The Warwick County Auxiliary furnishes a member of the Medical Society for health lectures in the public schools. At each Auxiliary meet-

ing in Richmond guest speakers talk on some interesting educational health subject.

The county auxiliaries report all types of public relations work. The principal work of the Postgraduate Auxiliary, Petersburg, is contributing to the needs of the Postgraduate Hospital at Petersburg. In order to raise funds to accomplish this end, they held two rummage sales, the proceeds from these being $149.00. They also sponsored a linen shower. For this a contribution was made through the churches. This amounted to about $600.00 worth of material. They have co-operated with the Y. W. C. A. by contributing two memberships. The Auxiliary to the Richmond Academy of Medicine rewarded the five-point children from every school in the State by giving them a trip around Richmond and serving them lunch; seventy-five children were entertained this year. This Auxiliary supplied milk for undernourished school children. Fifteen members gave clerical help during the Early Diagnosis Campaign of the Richmond Tuberculosis Association. The Norfolk County Auxiliary made two monetary contributions to families of needy physicians. Magazines and books have been taken regularly to seven hospitals and welfare organizations. The James City and New Kent Auxiliary collects and gives used clothing to the county health nurse for needy families. They are co-operating with the Red Cross, Kings Daughters, and Parent-Teacher Association in their health program and sewing production work. The prenatal care program of the Warwick County Auxiliary has been outstanding. Members of this Auxiliary paid eighty-three visits to prospective mothers, medical attention and nursing was arranged for layettes, bed linens and food supplies were given. Children were cared for while mothers were in the hospitals. In addition, this Auxiliary co-operated with the Cosmopolitan Club by checking upon school children's glasses. One operation was financed; 572 garments were given for storm relief; shoes were given seventeen children and Santa Claus visited sixteen. The Lynchburg Auxiliary contributed to the milk fund of the public schools.

Each Auxiliary has its social program. Some of the meetings are followed by teas. Card parties, moving pictures and plays were sponsored by the auxiliaries for the purpose of raising funds to carry out the program of the auxiliaries.

The Richmond Auxiliary is contributing funds to the new project of the Richmond Academy of Medicine—the establishing of the Pathological Museum. The Norfolk Auxiliary has furnished the doctors' Assembly Hall with new draperies.

The members of the Woman's Auxiliary express appreciation to the editor of the VIRGINIA MEDICAL MONTHLY for allowing us space in each issue for Auxiliary news.

I wish to take this opportunity to thank the President and the members of our Advisory Council for their interest in this Auxiliary and the wise counsel which they have given us.

Respectfully submitted,

GERTRUDE M. BURGES HARRIS,
(Mrs. William Lett Harris)
President of the Woman's Auxiliary to the Medical Society of Virginia.

The report of the Nominating Committee was then called for and presented by Dr. W. B. Martin, as follows:

President-Elect—Dr. P. St. L. Moncure, Norfolk.

Vice-Presidents—Dr. Carrington Williams, Richmond; Dr. S. B. Moore, Alexandria; Dr. Alexander F. Robertson, Jr., Staunton.

Executive Secretary-Treasurer—Miss Agnes Edwards, Richmond.

It was moved, seconded and carried that the report of this committee be accepted as a whole.

Invitations were presented for the 1935 meeting from the Norfolk County Medical Society and from the A. T. Henderson Company for a trip to Bermuda. Dr. Hodges moved that we accept the invitation to Norfolk. This was seconded and carried.

Dr. R. W. Miller offered the following resolution: That the secretary be requested to wire Dr. William F. Drewry, expressing the regret of the members of the House of Delegates that illness prevented his attendance in Alexandria, that we miss his inspiration and helpfulness and that we hope for his sure and speedy recovery. This was seconded and carried.

By ballot, Dr. Wright Clarkson, Petersburg, was elected delegate to the American Medical Association for a term of two years, and Dr. R. W. Miller, Richmond, alternate for a term of two years.

Dr. C. L. Harrell moved that the secretary be instructed to thank the Alexandria doctors for their hospitality. Seconded and carried.

The following councilors from the even numbered districts were named:

2nd District—Dr. Julian L. Rawls, Norfolk.

4th District—Dr. Wright Clarkson, Petersburg.

6th District—Dr. W. L. Powell, Roanoke.

8th District—Dr. J. E. Knight, Warrenton.

It was stated that it would also be necessary for the members of the 7th District to appoint a councilor as, in the redistricting of the State, the former 7th District councilor is now in the 8th District. As no delegates were present from the 7th District, the appointment was left to the incoming president.

There being no further business, the meeting adjourned.

AGNES V. EDWARDS, *Secretary.*

The President, Dr. F. H. Smith, later appointed Dr. C. O. Dearmont, White Post, as Councilor for the 7th District upon nomination of delegates from that District.

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CONSTITUTION AND BY-LAWS MEDICAL SOCIETY OF VIRGINIA

(As Revised and Adopted at Sixty-fifth Annual Meeting in Alexandria, Va., October, 1934)

CONSTITUTION

ARTICLE I—TITLE

The name of this organization shall be the Medical Society of Virginia. The words "the Society" in this constitution and its By-Laws shall be construed to mean "the Medical Society of Virginia."

ARTICLE II—PURPOSES

The purposes of this Society are to promote the science and art of medicine, the protection of public health, and the betterment of the medical profession.

ARTICLE III—COMPONENT SOCIETIES

The State of Virginia shall be divided into component medical societies of one or more counties. The Constitution and By-Laws of these societies shall be in conformity with those of the State Society, and the principles of Medical Ethics of the American Medical Association shall govern the members.

ARTICLE IV—COMPOSITION OF THE SOCIETY

White physicians in Virginia, not practicing sectarian medicine, members of a component society, are eligible to active membership. Provision may be made for associate membership.

ARTICLE V—HOUSE OF DELEGATES

The House of Delegates shall be the business and legislative body of the Society, and its membership shall consist of the delegates elected by the component societies, the President, the President-elect, and the members of the Council.

ARTICLE VI—COUNCIL

The Council shall have charge of the business affairs of the Society when the House of Delegates is not in session, and shall prepare and present a budget for the ensuing year to the House of Delegates at its first session. The Council shall consist of one member from each Congressional district of the State, together with the President and President-elect.

ARTICLE VII—OFFICERS

The officers of the Society shall be a President, a President-elect, who shall succeed to the Presidency the following year, three Vice-Presidents, and an Executive Secretary-Treasurer. The office of the Executive Secretary-Treasurer may be held by a non-member.

The officers shall be elected during the annual session of the House of Delegates, and will begin service at the adjournment of the annual session and continue until the end of that term, or until a successor qualifies. The term of office shall be for one year.

ARTICLE VIII—STANDING COMMITTEES

The Standing Committees of the Society shall be: (1) Publication and Program, (2) Scientific Exhibits and Clinics, (3) Department of Clinical and Medical Education, (4) Legislation, (5) Medical Economics, (6) Membership, and (7) Ethics.

ARTICLE IX—TRUST FUND FOR POST-GRADUATE CLINICAL EDUCATION

The last five living ex-presidents shall constitute a special committee to collect and hold in trust the post-graduate fund of the Society. The retiring president shall be chairman.

ARTICLE X—ANNUAL SESSION

There shall be an annual session of the Society and the date and place of the meeting shall be determined by the House of Delegates, but at its discretion, these may be selected by the Council.

ARTICLE XI—FUNDS

Funds for the society may be raised by a per capita assessment, voluntary contributions and other business activities. The funds shall be expended to carry out the general purposes of the Society.

ARTICLE XII—SEAL

The Society shall have a seal bearing date of organization of the Society. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE XIII—BY-LAWS

The Society may adopt by-laws not in conflict with this Constitution.

ARTICLE XIV—AMENDMENTS

This Constitution may be amended at an annual session by a two-thirds vote of the House of Delegates, and ratified by the general meeting, provided such amendment is previously published in the official publication of the Society, at least a month before the annual meeting. All previous constitutions of the Society are repealed when this Constitution is adopted and put into effect.

ARTICLE XV—WHEN IN FORCE

This Constitution as revised shall be in force upon its adoption by the House of Delegates, and ratification by a general meeting of the Society.

BY-LAWS

ARTICLE I—MEMBERSHIP IN THE SOCIETY

Section 1—Members of the Society are classified as active and associate. Active membership is based upon membership in a component society.

The active members of the Society shall be those who are members in good standing in component societies and those not members of component societies but active members of this Society in good standing at the time of the adoption of these By-Laws, and all physicians in good standing in counties in which there is no component

society, provided they meet all the requirements of the State Society, and have the endorsement of the present members of the Society from such county.

Active members, who move out of the State, become associate members of the Society. Teachers of sciences allied to medicine and medical officers of the Army, Navy and Public Health Service, temporarily stationed in Virginia, may be elected to associate membership through component societies, or by the House of Delegates upon recommendation of the Membership Committee. Associate members may resign membership by giving notice to the Executive Secretary-Treasurer, or, on recommendation of the Ethics Committee, be suspended or expelled by the House of Delegates for sufficient cause. Any associate member, eligible to membership in a component society, may be required by the Council to make application for membership in such component society.

Section 2—No one shall be enrolled as an active or associate member of this Society until the Executive Secretary-Treasurer has received his or her prorated annual dues.

Section 3—The privileges of voting, holding office, and serving on committees is limited to the active membership. In all other respects the status of the active and associate members is the same.

Section 4—For long, faithful or distinguished service, the House of Delegates, upon recommendation of the Membership Committee, may elect annually two resident members and one non-resident physician to honorary, active or associate membership.

Section 5—Every member, after verification of good standing from the rolls, shall register and be given a membership badge before taking part in any of the proceedings of the annual session. All badges shall be furnished by the Society.

ARTICLE II—COMPONENT SOCIETIES

Section 1—The component societies shall be those holding charters from the Society. All component county societies holding charters at the time of the adoption of these By-Laws will retain such charters as component societies.

Section 2—There shall be only one component society in a county. A component society may embrace one or more counties. When a component society qualifies, it may obtain a charter upon application to the Executive Secretary-Treasurer, said charter to be signed by the President and the Executive Secretary-Treasurer. Should it seem desirable that a county unite with a county or counties in an adjoining congressional district, as a component organization, such action may be taken provided it be sanctioned by the councilor from each of the districts concerned. Such component organization shall be deemed to be in the jurisdiction of the councilor of the district in which the majority of the membership resides.

Section 3—A component society consisting of two or more counties may upon petition to the Council be divided and given separate charters, if the Council is of the opinion that such division is in the interest of medical organization.

Section 4—Each component society shall judge the qualification of its own members.

Section 5—A component society shall drop from its roll a member whose license to practice medicine in the State has been revoked or whose membership in the State Society has been lost on account of misconduct.

Section 6—A member expelled by the component society can appeal to the State Society through the Ethics Committee.

Section 7—A member may join a more convenient component society in an adjoining county, provided the component society of the county in which such member resides gives its consent.

Section 8—Each component society shall send to each annual meeting of the Society its number of delegates and alternates fixed by Article IV, Section 2 of the by-laws.

Section 9—The Secretary of each component society shall keep a roster of its members, including name, address, year of graduation, college, date of State license, and such other information as may be desired by the Society. Once a year, not later than July the 1st, the secretary of each component society shall send a list of its members to the Executive Secretary-Treasurer of the State Society.

Section 10—The component societies shall co-operate with the officers of the State Society to carry out the plans, laws and purposes of this organization.

ARTICLE III—GENERAL MEETINGS

Section 1—The general meetings of the Society are open to all registered members and guests.

Section 2—At each annual meeting there shall be an address by the President and not more than two addresses by invited guests.

Section 3—With the exception of the address by the President and invited guests, no address, paper, or other contributions on the program shall be longer than fifteen minutes.

Section 4—No one shall discuss a paper more than once and then for only five minutes, except the leader of the discussion of a selected symposium, who may be allowed a maximum of ten minutes.

Section 5—No contribution shall appear on the program unless the title is sent to the Executive Secretary-Treasurer at least five weeks before the annual session, and only then when endorsed by the Program Committee. No member may present more than one paper at an annual session.

Section 6—If the author is not present when a paper is called, it shall be placed at the end of that section of the program. An author who has been absent twice without having submitted a typewritten paper to the secretary for publication shall be debarred from the program for two (2) years.

Section 7—All papers and contributions are the prop-

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erty of the Society and cannot be published elsewhere without the consent of the Publication Committee.

Section 8—The scientific work of the Society may be divided into two or more sections.

Section 9—In a general meeting, after the program of a section is completed and before the House of Delegates adjourns, a member may initiate any business matter not previously considered in the House of Delegates, to be acted upon by that body, provided a quorum of fifty (50) members be present in the general meeting.

Section 10—A rule governing the program or conduct of a general meeting may be changed only by a two-thirds vote of the members present.

ARTICLE IV—HOUSE OF DELEGATES

Section 1—The first assembly of the House of Delegates shall be held on the first day named for the annual session. Subsequent meetings shall be held at hours which will not conflict with the scientific program. The reports of committees shall be published in the official publication of the Society in the issue preceding the annual session. These reports may be discussed and amended by the House of Delegates. Discussions shall be limited to five minutes.

Section 2—Each component society shall elect annually to membership in the House of Delegates, one delegate and one alternate for each thirty-five (35) members or major fraction thereof, or as the component society may elect, one delegate and one alternate from each county in such component society. In any event, each component society is entitled to at least one delegate and one alternate in the House of Delegates. In case the full number of delegates accredited to a component society are not present at the meeting of the State Society, those members present from such component society shall, from members of that society present, elect or appoint a sufficient number of delegates to complete its quota.

Section 3—Thirty delegates representing at least ten component societies shall constitute a quorum of the House of Delegates.

Section 4—The President shall preside over the meetings of the House of Delegates. The Executive Secretary-Treasurer shall be the Secretary.

Section 5—If the eligibility of any member is questioned, the president may appoint a committee on credentials to report on such member or refer the case to the Committee on Ethics.

Section 6—The House of Delegates shall elect officers of this Society as provided for in Article V of the By-Laws.

Section 7—The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the constitution and by-laws of that organization. Such delegates shall be elected by ballot, and each member will be allowed to vote for as many of the nominees on the ballot as there are delegates and alternates to be elected. Those receiving the highest votes will be declared elected as delegates and those receiving the next highest votes will be declared elected as alternates.

Section 8—The House of Delegates shall nominate to the Governor of Virginia at the proper time in accordance with the laws of Virginia, members of the State Board of Medical Examiners.

Section 9—The House of Delegates, at each annual session, shall have authority to approve, modify or reject the budget recommendations presented by the Council for the ensuing fiscal year. In case a budget is not presented by the Council, the House of Delegates shall have authority to prepare the budget.

Section 10—The House of Delegates may revoke the charter of a component society for violation of the laws of the Society.

Section 11—The House of Delegates may appoint special committees from its own membership or from the membership of the Society.

Section 12—The Executive Secretary-Treasurer shall make a complete yearly report to the House of Delegates at each annual session.

Section 13—All officers and delegates elected, all nominations made to the Governor and a summary of all other business transacted by the House of Delegates shall be reported to the Society at a general meeting before the close of the annual session, in accordance with Article V of the Constitution.

ARTICLE V—ELECTION OF OFFICERS

Section 1—The House of Delegates, at its first meeting, shall elect from its membership a Committee on Nominations, consisting of one member from each Congressional District who shall be nominated by the delegates present from that district and, in event a district is not represented in the meeting, such nomination shall be made by the President. This Committee shall report to the House of Delegates the result of its deliberations in the form of a ticket containing the names of one or more members for each of the offices to be filled at the annual session. Nothing in this section shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates. The election of officers shall be by ballot and a majority vote is necessary for election. The lowest nominee will be dropped on each ballot until one receives a majority vote. In case of a tie, the president shall cast the deciding vote.

Section 2—Only active members in good standing are eligible to office.

Section 3—The House of Delegates shall at each annual session elect a President-elect for a term of one year. No member of the Society who lives in the city or county in which the Society is holding its session shall be eligible to election to the office of President-elect for the succeeding year. At the end of this term, the President-elect shall automatically become President for a term of one year.

Section 4—The House of Delegates at each annual session shall elect three (3) vice-presidents to rank ac-

cordingly, these to represent the various sections of the State, as far as possible.

Section 5—The House of Delegates shall at each annual session elect an Executive Secretary-Treasurer for a term of one year.

Section 6—On the second day of the annual meeting of the Society at such time and place as shall be designated by the President, Councilors shall be elected for a term of two (2) years by the delegates from their respective Congressional Districts, those from the odd numbered Congressional Districts on odd years, and those from the even numbered Congressional Districts on the even years. At this time, should there be a vacancy in the membership of the Council and the district not represented in the meeting, the House of Delegates, on nomination by the President, shall elect a Councilor for that district.

Section 7—In case there is a vacancy in the office of President-elect, or in case the President-elect was appointed pro tempore by the Council, the House of Delegates at the annual session shall also elect a President for the following term.

ARTICLE VI—DUTIES OF OFFICERS

A. *President*

Section 1—The President shall be the executive head of the Society.

Section 2—The President shall be the presiding officer at the general meetings of the Society, president of the House of Delegates, chairman of the Council, and ex-officio member of all committees. The President shall vote in the general meetings, in the House of Delegates, and in the Council only in the case of a tie. If the President or the President-elect cannot be present, a Vice-president shall preside over the general meetings, the House of Delegates, the Council or special scientific sections.

Section 3—The President shall deliver the annual address and shall have the privilege, after conference with the chairman of the Program Committee, of inviting as many as two guest-speakers at the annual session.

Section 4—The President shall fill any vacancy occurring between annual sessions in the Council, delegates to the American Medical Association, and standing committees, and such appointments shall be valid until the end of the next annual session. He shall appoint any necessary special committees at the time he takes office, or during the year.

Section 5—The President, in conjunction with the Committee on Publication and Program, shall prepare the annual scientific programs.

Section 6—The President shall visit as many of the component societies of the State Society as possible during the year, in the interest of the Society, actual expenses incurred being paid in accordance with budget determined upon by the House of Delegates.

B. *President-Elect*

Section 7—The President-elect shall be an ex-officio member of the House of Delegates and an ex-officio member of the Council. The President-elect shall act for the President in his absence or disability, and shall automatically succeed to the presidency at the end of the term.

Section 8—The President-elect, at the annual session when he assumes the office of President, shall appoint one member in place of the retiring member on each standing committee and shall name the chairmen of the standing committees for the ensuing year. Announcement of these names shall be made at the general meeting when he assumes office.

C. *Vice-Presidents*

Section 9—The Vice-presidents shall assist the President in the discharge of his duties and the Councilors in their districts in the organization of component societies. In event of the disability, death or resignation of the President, a Vice-president, according to rank, shall succeed him for the remainder of his term of office.

D. *Executive Secretary-Treasurer*

Section 10—The Executive Secretary-Treasurer of the Society shall be the executive agent of the Society, the the secretary of the general meetings, secretary of the House of Delegates, secretary of the Council, and general manager of the official publication of the Society.

Section 11.—The Executive Secretary-Treasurer shall be the custodian of all property of the Society, provide for registration of members at general meetings, conduct the general correspondence of the Society, and, with the consent of the President, employ necessary assistance.

Section 12—The Executive Secretary-Treasurer shall collect all money due the Society and pay out these funds upon written order of the President, or upon his designated authority. The Executive Secretary-Treasurer shall be bonded as approved by the Council.

Section 13—The Executive Secretary-Treasurer shall mail notices to members at least two months before the annual session asking for papers and shall, under the direction of the Publication and Program Committee prepare and send to each member a program of the annual session.

Section 14—The Executive Secretary-Treasurer shall make a complete yearly report to the House of Delegates at each annual session.

ARTICLE VII—COUNCIL

Section 1—The Council shall consist of the President, President-elect and one member from each Congressional District. The Council shall be the executive and finance committee of the House of Delegates and shall have charge of the business affairs of the Society when the House of Delegates is not in session. The President shall be the chairman of the Council and the Executive Secretary-Treasurer shall be its secretary.

Section 2—Each councilor shall be the organizer, advisor and censor for his district. A councilor shall visit each component society in his district once a year.

Section 3—Four members of the Council together with

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the President or President-elect shall make a quorum. Actual expenses may be paid members attending meetings of the Council in the interim between the annual sessions.

Section 4—At each annual session, the Council shall present a budget for the next fiscal year, based on the expected income and expenditures during this period, which budget shall be presented to the House of Delegates for its approval.

Section 5—The Council shall be charged with the duty of organizing the whole state into component societies, and, at each annual session, shall report on this work to the House of Delegates, with recommendations. The Council shall recommend to the House of Delegates the revocation of a charter of a component society when such component society flagrantly violates the rules of the Society.

Section 6—The Council shall provide offices for the Society headquarters.

ARTICLE VIII—STANDING COMMITTEES

The Standing Committees of the Society shall be as follows:

1. Publication and Program.
2. Scientific Exhibits and Clinics.
3. Department of Clinical and Medical Education.
4. Legislation.
5. Medical Economics.
6. Membership.
7. Ethics.

Each of these Committees, with the exception of the Department of Clinical and Medical Education, shall consist of three members, whose term of office shall be for three years. The members having first been appointed for one, two and three years, the incoming President shall appoint to fill vacancies created by expiration of term of office, and shall name the chairman of each committee. No member may serve on more than one standing committee the same year.

The Department of Clinical and Medical Education shall consist of the State Health Commissioner, the immediate ex-president, who shall be chairman, one member each from the two medical schools of the State, and two members of the Society from the State at large, the last four to be appointed by the incoming president.

All committees shall make reports annually to the House of Delegates. The chairman of all standing or special committees not members of the House of Delegates, shall have the privilege of the floor when reporting to the House or in any incidental discussions.

Actual expenses of members of such committees required to do official work in the interim between annual sessions may be paid upon the recommendation of the chairman of such committees and the endorsement of the president, if presented within thirty days after the meeting, provided budget allowance be made for such purpose in accordance with Art. VII, Section 4.

Publication and Program

Section 1—The Committee on Publication and Program shall conduct the affairs of the official publication of the Society in accordance with the expressed policy and adopted budget of the Society. Its chairman shall be Editor of the official publication of the Society. This Committee shall also have charge of the preparation of the annual program.

Scientific Exhibits and Clinics

Section 2—The Committee on Scientific Exhibits and Clinics shall have charge of the scientific exhibits and clinics for the annual sessions, in co-operation with the President. This committee shall endeavor to stimulate interest in scientific and research work among the members of the Society, and may institute appropriate methods to this end.

Department of Clinical and Medical Education

Section 3—The Department of Clinical and Medical Education shall endeavor to bring about co-operation of the Society with the medical schools, hospitals, clinics, and other teaching institutions of the State with the idea of maintaining the highest standards in these institutions; and to use every means to encourage and advance medical science, and bring it within easy reach of the postgraduate practitioners of the State. The retiring President shall be chairman of this Committee.

Legislation

Section 4—The Committee on Legislation shall endeavor to secure and enforce legislation in the interest of public health, scientific medicine, and the moral, social, fraternal, and ethical betterment of the medical profession in the State.

Medical Economics

Section 5—The Medical Economics Committee shall be the Committee to which are referred all questions of the business relationships of the Society.

Membership

Section 6—The Committee on Membership shall pass upon the applications for membership of those not members of a component society and make recommendations for honorary membership. The Committee shall also, through co-operation with component societies and the Executive Secretary-Treasurer, prepare proper obituaries for deceased members.

Ethics

Section 7—The Committee on Ethics shall consider all matters involving ethics and conduct of members on appeal from the component societies and may act independently in cases not under the jurisdiction of a component society.

All charges against any member shall be in writing, specifically stated, and signed by the accuser. The individual accused and under investigation shall be entitled to a personal hearing or representation. No charge against a member shall be heard by the Society or the House of Delegates, unless it has first been referred to the Committee on Ethics.

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No motion or discussion of expulsion, suspension or other censure of any member shall be allowed unless such member shall have been given two months' notice through the Committee on Ethics. The committee shall make its report to the House of Delegates at the first meeting during the annual session.

No member shall be expelled from the State Society except by a vote of three-fourths of the members of the House of Delegates present. Should the member come forward within twelve months succeeding his or her expulsion and offer satisfactory explanation, he or she may be reinstated, provided three-fourths of those present in the House of Delegates concur.

ARTICLE IX—COMMITTEE TO ADMINISTER TRUST FUND FOR POSTGRADUATE CLINICAL EDUCATION

Section 1—The retiring President shall be chairman of the special Committee of Ex-Presidents to provide a trust fund for postgraduate clinical education. The executive secretary shall act as secretary. The committee shall be active in securing subscriptions to the trust fund of the Society for postgraduate clinical education. This committee shall receive all contributions to this fund, contract with a good trust company for the investment of same in good securities, and each year pay to the department or committee in charge of clinical education the interest and other revenues accruing from the investment of this fund.

Section 2—The principal of the trust fund for postgraduate clinical education shall remain in trust and the interest and other revenues accruing from the investment of this fund shall be used by the department or committee in charge to help defray expenses of postgraduate clinical education. Members who have subscribed as much as $250.00 to the Trust Fund for postgraduate clinical education shall thereafter be exempt from payment of annual dues.

ARTICLE X—DUES

Section 1—There shall be an annual assessment of $5.00 upon each member. These dues for each calendar year shall be made in one payment and are payable before December 31, of each year. Members joining the Society after June the 30th, shall be assessed $2.50 for the remainder of that fiscal year.

Section 2—The Executive Secretary-Treasurer is charged with the duty of collecting or adjusting past due per capita assessments, after conference with the President, and, if necessary, the Councilor of the district in which the member in arrears resides. A member, whose dues are twelve months in arrears, shall be dropped automatically from the rolls of the Society.

Section 3—Honorary members or others deserving it, at the discretion of the President, will be exempted from the payment of annual dues. Any member over seventy (70) years of age upon his request may be so exempted by the Executive Secretary-Treasurer.

Section 4—The fiscal year of the Society for membership shall correspond with the calendar year.

ARTICLE XI—OFFICIAL PUBLICATION

The official publication of the Society shall be known as the VIRGINIA MEDICAL MONTHLY. Publication of the journal shall be under the control of the Publication and Program Committee which shall co-operate in every way with the various committees of the Society for the good of the organization.

ARTICLE XII—ETHICS

The ethical principles governing the members of the American Medical Association shall govern the Society.

ARTICLE XIII—RULES OF ORDER

The deliberations of the Society shall be conducted in accordance with parliamentary usage as defined in Roberts Rules of Order.

ARTICLE XIV—AMENDMENTS

These By-Laws may be amended by a two-thirds vote of the House of Delegates, provided such amendment is proposed in writing and has laid on the table for at least one day. All previous By-Laws of this Society are repealed when these By-Laws are adopted and put into effect.

ARTICLE XV—WHEN IN FORCE

These By-Laws shall be in force upon adoption by the House of Delegates and ratification by a general meeting of the Society.

Public Health Statistics

I. C. RIGGIN, M. D.

Health Commissioner of Virginia

The communicable disease report received at the office of Dr. G. F. McGinnes, State Epidemiologist, during September, 1934, showed the following cases compared with the same month in 1933:

	1934	*1933*
Typhoid and Paratyphoid Fever	137	157
Diphtheria	197	309
Scarlet Fever	225	324
Measles	60	57
Meningitis	5	8
Poliomyelitis	21	11
Rocky Mountain Spotted Fever	6	2
Typhus Fever	1	1
Undulant Fever	1	7
Tularaemia	4	3

In the minds of physicians the hunting season is commonly associated with tularaemia, a disease deadly to rodents and usually transmitted to man by them. There are cases on record where tularaemia has been transmitted through bites of flies and ticks but the majority of cases give a history

of handling rabbits. Care should be taken not to contaminate the hands through open abrasions or the conjunctival sac with portions of the internal organs or body fluids of infected animals, and when eaten should be thoroughly cooked.

Aside from the seriousness of this disease, it should be of especial interest to us for it is the only disease worked out entirely by American investigators. McCoy and Chapin first discovered the organism in 1911 in ground squirrels in Tulare County, California, from which the name was derived. It was not until seven years later, that the first human case of infection was recognized. Since then an increasing number of cases have been reported from all but the northeastern part of the United States.

The disease is caused by Bacterium Tularense, a small pleomorphic organism, Gram negative, nonmotile and non-spore bearing, which grows only under aerobic conditions on glucose cystine agar. A temperature of 58° C. kills the organism in ten minutes so that adequate cooking renders the infected tissue harmless.

Though the typical case may be easily diagnosed, Dr. Blackford,* of the University of Virginia, presents a history of thirteen cases to point out the difficulties encountered in differential diagnosis. His cases simulated a wide variety of conditions—syphilis, primary glandular adenopathy, genitourinary disease, pustular acne, typhoid fever, pyelitis, tuberculosis, lung abscess, bronchopneumonia, central nervous system disease, and chronic bronchitis. He suggests that since accompanying pathologic changes in the chest were found in six of his thirteen unselected cases, they might be manifestations rather than complications of the disease.

The disease occurs in four clinical types:

1. Ulceroglandular, the primary lesion being a papule, later an ulcer of the skin, accompanied by enlargement of the regional lymph glands.

2. Oculoglandular, the primary lesion being a conjunctivitis, accompanied by enlargement of the regional lymph glands.

3. Glandular, without primary lesion, but with enlargement of the regional lymph glands.

4. Typhoidal, without primary lesion and without glandular enlargement. This type has occurred largely in laboratory workers.

*Blackford, Staige D.—VIRGINIA MEDICAL MONTHLY, 58: 10-13, April, 1931.

The incubation period varies from one to nine days, the average being slightly more than three. The onset is sudden and is manifested characteristically by headache, chilliness, chills, aching bodily pains, sweating, prostration and fever. In the ulceroglandular type, which seems to preponderate in this vicinity, the patients complain within forty-eight hours after onset, of pain in the area of the lymph glands which drain the site of infection. On examination these glands are found to be tender and slightly enlarged. No other glands are involved and pain in the regional glands precedes by a day any definite reference on the part of the patient to the site of infection. Then a painful, swollen and inflamed papule appears at this point. This papule subsequently breaks down, liberating a necrotic core or plug, leaving an ulcer about three-eighths of an inch in diameter with raised edges and having a punched out appearance. This persists for several weeks. On healing the ulcer is replaced by scar tissue. The lymph glands proceed to suppuration in about half the cases. Those which do not break down remain hard, palpable and rather tender for two or three months before gradually returning to normal. Weakness, loss of weight, recurring chills, sweats and prostration are often noted during the active stage of the disease, which lasts two or three weeks. Fever is always present during this period and characteristically shows a remission several days after onset to be followed by a secondary rise to the original height, after which there is a gradual decline to normal. During the febrile period the leucocyte count is slightly to moderately increased and may reach 14,000, but is of no diagnostic value. The convalescence is slow and the patient rarely returns to full-time work in less than two to three months. Complete recovery, however, is the rule and the mortality is less than 5 per cent.

The oculoglandular and typhoidal types follow the same general course in regard to the systemic manifestations.

The most common complications are bronchopneumonia, acute pleurisy, meningitis, peritonitis and appendicitis.

Final diagnosis is made on the basis of agglutination reaction since this method has proved satisfactory and handling of cultures and infected material dangerous to laboratory workers. The agglutination is negative in the first week, becomes posi-

tive usually during the second week, attains its maximum titre in the 5th, 6th or 7th and begins to fall in the 8th week. So far as is known one attack confers immunity in man. There is no specific treatment. Rest in bed is most important and it has been advised that the enlarged glands be incised only when a very evident soft thin place appears in the skin overlying the glands.

In Virginia the reported cases reached their peak in 1932 with 105 cases, when it was suggested that the increased prevalence was due to a greater use of wild rabbits as food during the period of economic depression. In 1933 there were seventy-eight cases and up to the first of October in 1934, twenty-seven cases, eleven of which were in January. However, in 1933 over 50 per cent of the cases occurred in the last three months of the year so the number of cases this year may yet equal last year's record.

Woman's Auxiliary to the Medical Society of Va.

President—MRS. JOSEPH BEAR, 3012 Monument Ave., Richmond.
President-Elect—MRS. FLETCHER J. WRIGHT, Petersburg.
Recording Secretary—MRS. JAMES B. STONE, 2042 Park Ave., Richmond.
Corresponding Secretary—MRS. AMBROSE MCGEE, 4107 Kensington Ave., Richmond.
Treasurer—MRS. REUBEN F. SIMMS, 2034 Park Ave., Richmond.

The Alexandria Meeting.

A pre-convention board meeting was held at a breakfast at The Anchorage Tea Room, Wednesday morning, October 10th.

The Auxiliary met at the Belle Haven Country Club on Wednesday morning. At this time, Mrs. J. Allison Hodges and Mrs. Southgate Leigh were honored by being made life members of the Auxiliary. After the meeting, a delicious luncheon was served at the Club, with the Alexandria Auxiliary as hostess.

Wednesday afternoon, there was a drive to Arlington.

One of the most delightful events of the convention was the tea given on Wednesday afternoon. The Alexandria Auxiliary entertained the visiting Auxiliary members at a beautiful tea in the lovely home of Mrs. H. A. Latane. Mrs. Latane was assisted in receiving by Mrs. William Lett Harris, President of the State Auxiliary.

On Wednesday evening, October 10th, at nine o'clock the Alexandria Auxiliary was hostess to the visiting physicians and their wives at a reception at Gadsby's Tavern. The reception room was beautifully and artistically decorated with enormous bowls of dahlias and autumn leaves, and the strains of the more familiar songs of long ago were played during the evening by a string quartet. In the receiving line were Mrs. Robert Tomlinson, President of the National Auxiliary, Mrs. Southgate Leigh, President of the Southern Auxiliary, Mrs. William Lett Harris, retiring President of the Virginia Auxiliary, Mrs. Joseph Bear, new President of the Virginia Auxiliary, Mrs. Llewellyn Powell, President of the Alexdria Auxiliary, Mrs. G. T. Klipstein, Chairman of Entertainment, Mrs. W. T. Burch, Chairman of Reception, and Mrs. J. Allison Hodges, of Richmond. The atmosphere of Gadsby's Tavern is permeated with the history of the past. In the panelled rooms of this old Inn George Washington, George Mason, Marquis de Lafayette, Baron de Kalb, John Paul Jones and Ann Warren, "ornament of the American stage," were once familiar figures. It was here that the famous "Birthnight Balls" honoring Washington's birthday were held, and attended by General and Mrs. Washington. Three floors of rare and exquisite pieces of antique furniture furnish the tavern. A reception at any place with such gracious and hospitable hostesses would have been a delightful affair, but the reception at Gadsby's Tavern was one of those rare experiences which are cherished in the mind among treasured memories.

Thursday morning was taken up with a sightseeing trip of the most interesting places in Alexandria. It was felt by all going on this tour that Alexandria is one of the most charming spots in Virginia.

Thursday noon a luncheon was given at the Army and Navy Country Club, with Mrs. Tomlinson, of Wilmington, Delaware, president of the National Auxiliary, and Mrs. Southgate Leigh, Norfolk, president of the Southern Medical Auxiliary, as the honored guests. Several officers of the Medical Society of Virginia had also been invited to attend. Mrs. Harris presided and called upon each doctor

XUM

present for remarks which they gave most wittingly. Mrs. Tomlinson and Mrs. Leigh were introduced by Mrs. J. Allison Hodges. Mrs. Tomlinson stressed the importance of the meeting of the American Medical Association in Atlantic City in June. The Canadian doctors and their wives will be the guests of the Association, and it is to be the largest medical meeting ever held in the world. Mrs. Leigh invited all of the members to be at the meeting of the Southern Medical Association in San Antonio in November.

Mrs. M. N. King, parliamentarian, installed the new officers. A rising vote of thanks was given for the splendid work done by the officers of the past two years with Mrs. William Lett Harris as president.

Mrs. Joseph Bear, Richmond, the new president, gave a most inspirational address.

The meeting was then adjourned until next year.

New Officers, Directors and Chairmen of Committees.

At the meeting of the Woman's Auxiliary to the Medical Society of Virginia in Alexandria, in October, Mrs. Joseph Bear, Richmond, succeeded to the presidency. Officers elected at this time are:

President-Elect—Mrs. Fletcher J. Wright, Petersburg.
Vice-Presidents—Mrs. Meade Edmunds, Petersburg; Mrs. T. Elmore Jones, Portsmouth; Mrs. W. S. Snead, Newport News; Mrs. Hawes Campbell, Enfield.
Recording Secretary—Mrs. James B. Stone, Richmond.
Corresponding Secretary—Mrs. W. Ambrose McGee, Richmond.
Treasurer—Mrs. Reuben F. Simms, Richmond.
Parliamentarian—Mrs. Lee E. Sutton, Richmond.
Directors—Mrs. Southgate Leigh, Norfolk; Mrs. F. W. Upshur, Richmond; Mrs. J. Allison Hodges, Richmond; Mrs. Wm. Lett Harris, Norfolk.

STANDING COMMITTEES

Organization Chairman—Mrs. Fletcher J. Wright, Petersburg.
Assistant Chairmen—Mrs. Meade Edmunds, Petersburg; Mrs. T. Elmore Jones, Portsmouth; Mrs. W. S. Snead, Newport News; Mrs. Hawes Campbell, Enfield; Mrs. Franklin Wilson, Norfolk.
Junior Organization Chairman—Mrs. Franklin Wilson, Norfolk.
Program and Health Education—Mrs. C. C. Smith, Norfolk.
Finance—Mrs. James K. Hall, Richmond.
Legislation—Mrs. Thos. W. Murrell, Richmond.
Public Relations—Mrs. F. J. Wampler, Richmond.
Hygeia—Mrs. Herbert Jones, Petersburg.
Revisions—Mrs. Eugene Lowenberg, Norfolk.
Press and Publicity—Mrs. W. T. Sanger, Richmond.
Printing—Mrs. Lee E. Sutton, Richmond.
Courtesy—Mrs. M. N. King, Norfolk.
Historian and Archives—Mrs. J. Allison Hodges, Richmond.
Exhibit—Mrs. H. M. Snead, Petersburg.
Jane Todd Crawford Memorial—Mrs. F. P. Barrow, Portsmouth.

An Invitation.

The Woman's Auxiliary to the Southern Medical Association will meet in San Antonio, Texas, November 13th to 16th.

Headquarters for the women will be in the St. Anthony Hotel where all meetings and functions will be held.

It is earnestly desired that our women of the South will make every effort to attend this meeting "en masse." Your presence will not only help the meeting but will be a great inspiration to you. San Antonio is delightful and everything possible is being done to make your visit enjoyable.

A cordial and pressing invitation is extended to everyone to attend the Auxiliary Luncheon on Wednesday, November 14th, to meet Mrs. Robert Tomlinson, National Auxiliary President, and other distinguished guests.

MRS. SOUTHGATE LEIGH, *President.*

Truth About Medicine

In addition to the articles previously enumerated, the following have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association:

Abbott Laboratories.
Ophthalmic Ointment Butyn 2 per cent and Metaphen 1:10,000.
Don Baxter Intravenous Products Corporation.
Dextrose Solutions 2½ per cent, 5 per cent, 7½ per cent, 10 per cent and 25 per cent in Half-Size Vacoliter Containers.
Dextrose 2½ per cent, 5 per cent, 7½ per cent and 10 per cent in Physiological Sodium Chloride Solution in Half-Size Vacoliter Containers.
Cheplin Biological Laboratories, Inc.
Cheplin's Ampoules Dextrose (d-Glucose) U. S. P., 50 per cent, 50 c.c. (Buffered).
Cheplin's Ampoules Dextrose (d-Glucose) U. S. P., 50 per cent, 50 c.c. (Unbuffered).
Cheplin's Ampoules Dextrose (d-Glucose) U. S. P., 10 Gm., 20 c.c. (Buffered).
Cheplin's Ampoules Dextrose (d-Glucose) U. S. P., 50 Gm., 100 c.c. (Buffered).
Cheplin's Ampoules Dextrose (d-Glucose) U. S. P., 50 Gm., 100 c.c. (Unbuffered).

Eli Lilly & Company.
Diphtheria Toxoid, Alum Precipitated (Refined)—Lilly.

Parke, Davis & Co.
Normal Horse Serum—P. D. & Co., one 1 c.c. rubber stoppered vial packages.
Rabies Vaccine (Cumming), seven vial packages.
Scarlet Fever Streptococcus Toxin for the Skin Test—P. D. & Co., one 10 c.c. vial package.

Reinschild Chemical Co.
Agar-Agar Shreds.

Frederick Stearns & Co.
Neo-Synephrin Hydrochloride Emulsion (Aromatic).
Procaine-Neo-Synephrin Hydrochloride Hypodermic Tablets.

E. R. Squibb & Sons.
Refined Diphtheria Toxoid Alum Precipitated—Squibb, ten 0.5 c.c. vial packages.

United States Standard Products Co.
Diphtheria Toxoid, Alum-Precipitated (Refined).
Erysipelas Streptococcus Antitoxin (Refined and Concentrated).
Dextrose Solution, 25 Gm., 50 c.c.
Dextrose Solution, 50 Gm., 100 c.c.

Abbott Laboratories
Bismuth Subsalicylate with Butyn—D. R. L.
Ampoules Procaine Hydrochloride Solution 10%, 2 c.c.
Ampoules Procaine Hydrochloride Solution, 2%, 5 c.c.
Procaine-Epinephrine Solution, 100 c.c. Bottle.
Procaine Hydrochloride Hypodermic Tablets ⅓ grain.
Procaine Hydrochloride Hypodermic Tablets 3 grains.

Cutter Laboratory
Solution Dextrose—U. S. P., 25 Gm., 50 c.c. in Bottles.
Solution Dextrose—U. S. P., 50 Gm., 100 c.c. in Bottles.
Solution Dextrose—U. S. P., 5% in Saftiflask Containers.
Solution Dextrose—U. S. P., 10% in Saftiflask Containers.

National Drug Company
Rabies Vaccine (Human) Chloroform Killed.
Refined Tetanus Toxoid (Alum Precipitated).

Parke, Davis & Co.
Capsule Ortal Sodium ¾ grain (0.05 Gm.)

Ucoline Products Co.
Ucoline Cod Liver Oil Concentrate.
Ucoline Cod Liver Oil Concentrate Tablets.

Winthrop Chemical Co., Inc.
Duotal Tablets, 5 grains.

Abbott Laboratories
Mixed Ragweed Pollen Extract Decimal Dilution Set.

Mallinckrodt Chemical Works
Hippuran
Hippuran (Crystals) 12 Gm. vial
Sterile Solution Hippuran 25 c.c. size

Wm. S. Merrell Company
Diothane
Diothane Crystals
Diothane 10% Solution

Parke, Davis & Co.
Ampoules Thio-Bismol, 2 Gm.
Tuberculin for the Mantoux Test

S. M. A. Corporation
Carotene—SMACO
SMACO Carotene in Oil
SMACO Carotene with Vitamin D Concentrate in Oil
SMACO Vitamin D Concentrate in Oil
SMACO Carotene and Vitamin D Concentrate in Cod Liver Oil

Winthrop Chemical Co., Inc.
Diodrast
Diodrast Sterile Solution (35 per cent, weight/volume), 10 c.c. size
Diodrast Sterile Solution (35 per cent, weight/volume), 20 c.c. size

The following product has been accepted for inclusion in the List of Articles and Brands Accepted by the Council But Not Described in N. N. R.

Stevenson's Mineral Oil Co.
Stevenson's Heavy Russian Mineral Oil (Mint Flavored)

Don Baxter Intravenous Products Corp.
Physiological Sodium Chloride Solution in Half-Size Vacoliter Containers.

Merck & Co., Inc.
Amidopyrine—Merck.

Book Announcements

Post-operative Treatment. By GEORGE SANFORD FOSTER, M. D., Surgeon to the Lucy Hastings Hospital, Manchester, N. H. Forewords by Horace Binney, M. D., and John C. Rommel, M. D. The Christopher Publishing House. 1933. Octavo of 323 pages with 18 illustrations. Boston, Massachusetts. Cloth. Price, $5.00.

This carelessly edited book contains little that is new and much that has been discarded in the treatment of surgical conditions. Its chief value is found in the frequently repeated but often neglected truism, "It should always be remembered that the patient is the most important person in the hospital." There is no index.

HARRY J. WARTHEN, M. D.

The Langhan's Cellule Aberrated in the Specific Cellule of Cancer. The Matrix Embryonic Cellule of the Primal Syncytium, The Langhan's Cellule: Its Great Importance Throughout Life; Especially in the Early Days of Ovum Life. The Cohenheim Theory. The Cellulettes. Syncytioma. The Pre-Cancerous Carcinoids. Teratomata. An illustrated Review of Some Primal Embryology, 2-8th Week, Including the Normal and Abnormal Cancer Cellule. By FRANK A. STAHL, M. D., Rush, 1887. Chicago, Ill. Octavo of 153 pages. Illustrated. Paper.

Virginia Medical Monthly

Founded by LANDON B. EDWARDS, M. D., April, 1874
Owned by MEDICAL SOCIETY OF VIRGINIA since November, 1919
WYNDHAM B. BLANTON, M. D., *Editor*
AGNES V. EDWARDS, Richmond, *Business Manager*

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All correspondence regarding editorial matters, articles, advertisements, subscription rates, etc., should be addressed to the Monthly, 1200 East Clay Street, Richmond, Va.

This journal is not responsible for the opinions and statements of its contributors.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

Subscription Price: $2.00 per annum in advance. Single Copies 25c.

VOLUME 61 NOVEMBER, 1934 No. 8

Editorial

The Education of Nurses.

After eight years of study the Committee on Grading of Nursing Schools has made its report in the form of a book of some 268 pages, entitled *Nursing Schools Today and Tomorrow.* The American Nurses Association from its headquarters in New York City, commenting on this report in a recent press release, briefly summarizes the difficulties confronting the profession as due to "overproduction" and "undereducation." Some interesting figures are advanced in support of each contention and some rather harsh things are said about certain types of training schools now engaged in the preparation of nurses for their professional career. It is a report physicians as well as nurses will do well to read.

Few will take issue with the statement that the supply of nurses is at present greatly in excess of the demand, but no one appears to know how many nurses are needed for the care of the American people under normal conditions. Certainly 288,000 nurses are too many to earn their support under prevailing conditions, but there is no evidence to show that that number is too large ideally for the good of the sick or for our social work needs. Whether or not lower charges and shorter hours would relieve the situation remains to be proven.

The position taken by the report that there is under-education of nurses appears to be less tenable. It is not apparent that the average nurse needs more education than she is at present getting. It is probably safe to say that 90 per cent of the nursing required of the profession can be well done by women trained as nurses now are trained. The care of the sick in their homes as well as routine hospital nursing does not make greater demands upon the average nurse's fund of knowledge than she is able to meet. Reasonable intelligence, honesty, neatness, patience, kindliness, diligence, tact, and taciturnity go a long way toward the making of the ideal nurse. Miss Nightingale's requirements were no higher. These qualities are not acquired or necessarily perfected by long years of training. If they are not possessed by the candidate at the start, education can do little to make a good nurse.

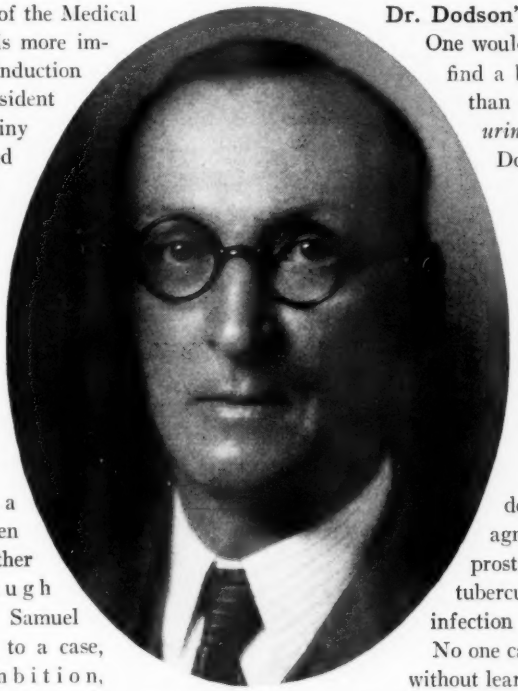
We are not forgetting that special demands are frequently made upon the nursing profession and that special talent and special training are then needed. Administrative, technical and teaching positions, as well as the public health and social services are inviting fields which women trained in nursing schools are qualified to enter. But only a small fraction of the profession can look forward to this type of employment. The great majority of nurses will not undertake it and hence have no need of the special training it demands. Higher entrance requirements and longer terms of study should not be imposed upon them.

It appears that the time is ripe for the recognition of two classes of nurses—one constituting the great body of the profession for which present educational requirements are probably adequate (it has been suggested that their time of training might

actually be reduced with profit), and another to be made up of an upper stratum of better prepared women who in addition to the regular course would have open to them courses of training designed to fit them for positions of greater responsibility and trust. Perhaps this type of training might be centered around the medical schools, while the smaller hospitals, as long as they meet certain minor legal requirements, might continue to conduct training schools as they have for years.

The President.

Among the proceedings of the Medical Society of Virginia none is more important than the annual induction into office of a new president into whose hands the destiny of the Society is committed for the next twelve months. Francis H. Smith to whom the honor belongs this year was born in Lexington, Virginia, April 12, 1881. Before he was ten years old he had made up his mind to become a physician, receiving his inspiration from the family doctor. It is said that on a certain stormy night when he and a smaller brother plowed their way through the snow to summon Dr. Samuel W. Dickinson of Marion, to a case, he first confessed this ambition, and from it he never wavered. With this in mind he matriculated at Fredericksburg College, graduating in 1899. The next year he entered the University College of Medicine, and on graduating four years later accepted the position of resident physician at St. Luke's Hospital, Richmond. His choice of a location fell to Lewisburg, West Virginia. Here in the beautiful Greenbrier Valley he led the life of the general practitioner until invited by Dr. George Ben Johnston and Murat Willis, a friend of his boyhood, to assume charge of a hospital in Abingdon. The growth of that hospital under his wise direction in association with men of like ambitions and ideals, as well as the establishment of the George Ben Johnston Memorial Clinic, are but a part of the recognition that has come to him in Southwest Virginia. For a number of years he has represented the Ninth District as a member of the Council of the Medical Society of Virginia and served on the State Board of Medical Examiners. The Medical Society of Virginia has every reason to expect the same high type of service and devotion to principle which Dr. Smith has displayed in every other enterprise with which he has been identified.



FRANCIS H. SMITH, M. D.,
President, Medical Society of Virginia.

Dr. Dodson's Book.

One would have to go a long way to find a better book for its purpose than the *Synopsis of Genito-urinary Diseases* by Austin I. Dodson of Richmond, just issued from the press of C. V. Mosby Company, St. Louis. Into fewer than 300 pages the author has compressed the essential facts of his specialty, properly emphasizing etiology, pathology, and diagnosis. Of special interest to medical men are the sections dealing with urological diagnosis, prostatic massage, prostatism, urinary calculi, and tuberculous and non-tuberculous infection of the urinary tract.

No one can read Dr. Dodson's book without learning a great deal. He has admirably condensed a large fund of information into a compact and readable book, which should prove not only useful to the medical student but highly helpful to the busy practitioner as well.

A New Pierian Spring.

The Modern Home Physician is advertised as a book of 776 pages, 932 pictures, and 2,000 articles which can be bought for three dollars and fifty cents and claims to stand "apart from everything in its field, unequalled for up-to-the-minute completeness, scientific accuracy and authority, plain-spoken, non-technical helpfulness, profuse illustrations, out-and-

out everyday usefulness, and astonishingly low cost."

"Here at last," the prospectus announces, "is a complete, authoritative easy-to-understand explanation of all common diseases—how to avoid them, their symptoms, and how to recognize them, the right way to treat them. Also full information on how to live to keep well."

The prospectus waxes enthusiastic: "What a help and comfort it will be to have a reliable authority in the house that will enable you to tell whether you need the Doctor and what simple home methods to follow till he comes. No more risk of overlooking possible dangerous conditions. No more heart-sickening worry over simple things easily taken care of. No more feeling of utter helplessness if the Doctor is delayed in coming. This wonderful new book is packed with the kind of information you would give anything for when you need it. . . . This great book gives complete information about every organ and system in the body and how it works. Guidance in the proper care of the body and warnings against the things that are harmful. Full details of diets, exercise, hygiene, childbirth, glands, weight, blood pressure, and hundreds of other subjects that concern everyone. Thumb-notch indexed so that you can find things instantly—even in the excitement of a sudden illness or accident."

Recollections of former works of this character crowd the memory: John Wesley's *Primitive Physic;* Thomas Ewell's *American Family Physician* and his *Letters to Ladies;* James Ewell's *The Planter's and Mariner's Medical Companion;* Buchan's *Family Physician;* Tissot's *Advice to People in General with Regard to their Health; The Poor Planter's Physician;* Smith's *Compleat Housewife;* Tennent's *Everyman His Own Doctor;* and Jenning's *The Married Ladies' Companion or Poor Man's Friend.* All of these books appear to have been written with striking singleness of purpose. They each essay, as their titles indicate, the impossible task of making every man his own doctor.

One wonders how long it will be—to paraphrase the words of Bryant—before this *Modern Home Physician* will join that innumerable caravan which moves to that mysterious realm where each must take his chamber in the silent halls of oblivion.

Virginians to the Front.

A few months ago M. Pierce Rucker was signally honored by the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons who made him their president, and at about the same time J. Shelton Horsley was elected president of the American Association for the Study of Neoplastic Diseases. Shortly before Robert C. Bryan was similarly honored by the American Association of Genito-urinary Surgeons. We now have a fourth example of good taste. The American Roentgen Ray Society has just made Fred M. Hodges its president for the ensuing year. Virginians will be pardoned some expression of pride in this recognition of Virginia doctors by national medical societies in this country.

George W. Eutsler.

The educational program of the Society has sustained a real loss in the resignation of its executive secretary, Mr. George W. Eutsler. It should be known that throughout the years he served the Department of Clinical Education, thanks to the generosity of the Extension Division of the University of Virginia, his services have been made available to the Society without cost. Much of the success of our venture in the teaching of obstetrics and prenatal care of expectant mothers is due to the faithful, able, and energetic manner in which he has organized and popularized this novel and highly commendable undertaking. The Medical Society of Virginia is grateful to him and wishes him well in his new field of endeavor.

We are glad to learn that Mr. G. Baskerville Zehmer, director of the Extension Division, has graciously come to the rescue and is now giving this extension education of our physicians his personal attention.

President's Message

Greetings:

TO THE MEMBERS OF THE MEDICAL SOCIETY OF VIRGINIA:

My best wishes for a prosperous and progressive year for organized Medicine in Virginia! To this end we should complete our organization at once and, especially, we should make a determined effort to enlist every eligible physician of the State in our membership.

There are now many physicians eligible for membership in the Medical Society of Virginia who are not members. There are, at least, 150 members of component societies who have not joined the State Society. Everyone of these physicians and many who do not belong even to the component societies should be induced to exercise their right and privilege of society membership.

Hence, the first appeal I shall make is that the several councilors and secretaries of component societies will put on drives to persuade all eligible physicians within their jurisdictions to become members, both of their local societies and of the State Society. Today more than ever before we should realize that in "union there is strength."

Closely connected with the necessity for increasing membership is the state of the Society's treasury. For the last several years the Medical Society of Virginia through action of successive sessions of its House of Delegates has been appropriating money much beyond its income, until now available reserves, once $12,000, have been reduced to about $2,000. The last House acted very wisely in adopting a definitely curtailed budget within our expected receipts, and then consistently voted down every plea for additional appropriations. It shall be the policy of the present administration to live within our means, if it is at all possible. Every committee should bear in mind that, should it exceed its budget, the committee does so at its own risk.

As for committees, the House of Delegates takes the position that a "special committee" is appointed to perform a special function, when it should be discharged. Hence it discharged all present special committees properly so called.

There have been several committees listed as "special committees" which have been improperly so-called. They are, in fact, standing committees, though neither the old nor recently revised By-Laws list them as such. I refer to the Walter Reed Commission, the Advisory Board of the Woman's Auxiliary, the Committee on Trust Fund for Postgraduate Education, and, probably, the Committee of Group Societies. These several committees have permanent duties and consequently have been retained.

A motion was passed by the last House appointing a committee to protect physicians against demands made upon them by Insurance Companies and others for services without pay. It does not seem necessary to appoint a special committee for this purpose so long as one of your standing committees can very properly handle the matter. I, therefore, refer this matter to the Ethics Committee.

Without further explanation, really unnecessary if the Constitution and By-Laws be consulted, I appoint the following committees, confidently expecting each committeeman to accept the appointment and exert his best efforts in this field of service:

STANDING COMMITTEES

(The numbers after names indicate the length of term of office.)

PUBLICATION AND PROGRAM: Dr. Wyndham B. Blanton (3); *chairman;* Dr. J. H. Neff (1); Dr. H. A. Tabb (2).

SCIENTIFIC EXHIBITS AND CLINICS: Dr. C. B. Morton (2), *chairman;* Dr. J. L. Wright (1); Dr. J. D. Willis (3).

DEPARTMENT OF CLINICAL AND MEDICAL EDUCATION: Dr. R. D. Bates, *chairman;* Dr. I. C. Riggin; Dr. J. C. Flippin; Dr. Lee E. Sutton; Dr. G. F. Simpson; Dr. P. W. Miles.

LEGISLATION: Dr. Frank S. John (2), *chairman;* Dr. W. L. Powell (1); Dr. H. T. Smith (3).

MEDICAL ECONOMICS: Dr. A. F. Robertson, Jr. (3), *chairman;* Dr. M. H. Harris (1); Dr. C. O. Dearmont (2).

MEMBERSHIP: Dr. J. A. White (3), *chairman;* Dr. Isaac Peirce (1); Dr. A. W. Hammond (2).

ETHICS: Dr. J. C. Flippin (2), *chairman;* Dr. J. A. Owen (1); Dr. W. R. Williams (3).

OTHER COMMITTEES

WALTER REED COMMISSION: Dr. Clarence Porter Jones, *chairman;* Dr. James D. Clements; Dr. Beverley R. Tucker.

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GROUP SOCIETIES: Dr. Southgate Leigh, *chairman;* Dr. J. M. Holloway; Dr. D. M. Kipps; Dr. J. A. Grizzard.

ADVISORY BOARD TO WOMAN'S AUXILIARY: Dr. J. Allison Hodges, *chairman;* Dr. Southgate Leigh; Dr. Hugh H. Trout.

TO ADMINISTER TRUST FUND FOR POSTGRADUATE CLINICAL EDUCATION: Dr. R. D. Bates, *chairman;* Dr. J. Bolling Jones, Dr. J. Allison Hodges, Dr. I. C. Harrison; Dr. J. C. Flippin.

F. H. SMITH, *President,*
Medical Society of Virginia.

Department of Clinical Education of the Medical Society of Virginia

Future of Department of Clinical Education Assured.

For about five years the Department of Clinical Education of the Medical Society of Virginia has functioned as a special committee of the Society. So comprehensive has been its work that, in the revision of the Constitution and By-Laws of the Society, this year, it was deemed expedient to merge the work of this Department with that of the standing committee on Medical Education and Hospitals, as the formation of the Department of Clinical Education was based on a recommendation of that Committee and it has functioned successfully on this basis. The new standing committee has been named the Department of Clinical and Medical Education.

Instead of being appointed as are other standing committees, the personnel of the Department shall consist of the immediate ex-president of the Society who shall be chairman, the State Health Commissioner, one member each from the two medical schools of the State, and two members from the State-at-large, the last four to be appointed by the incoming president. This year these members are Dr. R. D. Bates, chairman, Dr. I. C. Riggin, Dr. J. C. Flippin, Dr. Lee E. Sutton, Dr. G. F. Simpson and Dr. P. W. Miles.

The function of the Department as stated in the By-Laws is to endeavor to bring about cooperation of the Society with the medical schools, hospitals, clinics and other teaching institutions of the State, with the idea of maintaining the highest standards in these institutions and to use every means to encourage and advance medical science, and bring it within easy reach of the post-graduate practitioners of the State.

While the Society did not feel financially able to make as substantial appropriation for the work of the Department for the coming year as for the past two years, it did appropriate $250.00 for a continuance of postgraduate educational activities, and this appropriation, with the balance on hand and assistance from the Extension Division of the University of Virginia, and the additional help which will come through fees from doctors attending clinics, will make it possible for the Department of Clinical and Medical Education to conduct a few clinics and to assist local societies in arranging additional programs.

Dr. Bates Makes First Contribution to Postgraduate Education Trust Fund.

At its 1930 meeting, the Medical Society of Virginia adopted an amendment to its Constitution, designating the last five living ex-presidents of the Society as a committee to collect and hold in trust the postgraduate fund of the Society. Times have not been propitious for soliciting contributions to such a fund in recent years, but we are sure members of the Society will be interested in knowing that a beginning has at last been made and that $15.00 has been received as the first donation to this fund. This contribution comes from the present Chairman, Dr. R. D. Bates, and is testimony of his interest and devotion to the cause. We hope other donations may be forthcoming.

Extracts from Report of Dr. Maxwell E. Lapham, Field Clinician, to the Joint Committee on Prenatal and Postnatal Instruction.

The program of the Joint Committee on Prenatal and Postnatal Instruction has just been completed after nearly two and one-half years of continuous

work. It would be eminently desirable to measure whatever success this work has enjoyed in terms of definite improvement in the practice of obstetrics in the State, as regards maternal and neo-natal morbidity and mortality. However, this is an impossibility since there has been but little appreciable change in maternal mortality in the United States in the past thirty years for some reason, in spite of definite improvement in teaching the subject, and in spite of generally improved economic conditions during that time.

Success of the program can be measured in other ways than in terms of mortality statistics. One would assume that if the profession were sufficiently interested to continue this work through the State Medical Society's action for one and a half years after the first year's experiment, that the physicians felt they were profiting by this program. There has been an average continued attendance of 76 per cent of the enrolled men in classes. During the entire time there was an average of nearly two clinic and private patients seen for each meeting held. The questionnaires sent out by the Committee regarding reaction to the course and its efficacy brought answers from about one-half of the members who stated almost unanimously that they had benefited by the course. Further, the personal statements of many men to me that they have realized their shortcomings and are trying to improve, and the public admission of mistakes make me feel that not only are many men making honest efforts to improve their practices, but that their personal morale and the *esprit de corps* of groups has been greatly improved by these meetings.

The method of instruction has remained essentially the same throughout the courses—consisting of a series of lectures on practical subjects in obstetrics, a period for discussion, and the presentation of clinical patients, if there were any. The remaining time was given to personal interviews and private consultations with physicians if they desired to have me. This part of the work was always emphasized at the beginning of each circuit so that every man should have felt at liberty to call upon me at any time I was available. During the two and a half years 593 private patients were seen and discussed with physicians, and 304 clinic patients were presented to the groups.

The physicians' use of my time varied considerably in different localities. Some groups used me much more than others in consequence. In general, the rural and small town physicians called upon me more often than the urban physicians. Distances to be covered in some circuits necessarily prevented large numbers of consultations, but there was rarely a time when I could not have seen patients if I had been asked. Of course clinic patients were seen in greater numbers in the centers where meetings were held in large hospitals than in the rural sections, but there were several rural groups which provided clinical material in rather large numbers depending upon the interest of the local organization and upon the cooperation of community nurses. The list of circuits, describing roughly the part of the State covered by each, shows the incidence of consultations and clinic patients.

	Consultations	*Clinic Patients*
Charlottesville and lower Shenandoah Valley	67	31
Eastern Shore (Short Course)	9	3
Richmond and Southside	75	81
Roanoke—Wytheville	61	3
Norfolk and Southeast Virginia	47	34
Bedford (Short Course)	10	5
Southwest Virginia (Extreme)	73	14
Southwest Virginia (Bristol-Tazewell)	104	18
Danville (Southside)	36	13
Clifton Forge (Short Course)	13	2
Richmond and Mid-Tidewater	56	60
Shenandoah Valley	22	6
Northern Virginia	20	7

It would seem after a two and half year trial of this type of postgraduate education that it has proved its worth. It has been an unique experiment and seems to offer one particular advantage over other types of postgraduate instruction, namely, that it reaches some men who are not able to get away from their work, or who do not go for postgraduate work because of the effort or the time and the expense required. However, regardless of the locality—whether rural, small town or urban—the men who have been most cooperative have been the ones who least needed postgraduate study. How this can be remedied is difficult to say, but a more concerted effort might be made to have everyone attend a course at least once in the hope that he will remain.

The success of the entire program has largely been due to the excellent organization of the work by the Extension Division of the University of Virginia under the supervision of Mr. George Zehmer and Mr.

George Eutsler, the Secretary of the Joint Committee and active organization agent. Without this cooperation the work would have been much less successful from its beginning. The unquestioned support and backing of the entire Committee was of great help to me, and their apparent belief in my ability allowed me to carry on the work very much as I had conceived it myself. That I was allowed to do this made me more careful of my position as instructor and made me feel my responsibility to the Committee more keenly, lest I bring criticism upon them by my teaching.

Postgraduate Clinic at University of Virginia Hospital.

The fourteenth in the series of postgraduate clinics conducted by members of the medical faculty of the University of Virginia will be held at the University of Virginia Hospital Friday, November 16th.

PROGRAM

9:00- 9:30 A.M.—Registration, University of Virginia Hospital.

Morning Sessions:

9:30-10:00—Medical Clinic. Dr. J. C. Flippin.
10:00-10:10—Discussion.
10:10-10:40—Agranulocytosis. Dr. H. B. Mulholland.
10:40-10:50—Discussion.
10:50-11:20—Laboratory Diagnosis of Anemia. Dr. W. E. Bray.
11:20-11:30—Discussion.
11:30-12:00—Diagnosis and Treatment of the Commoner Affections of the Eye. Dr. H. S. Hedges.
12:00-12:10—Discussion.
12:30- 1:30—Lunch.

Afternoon Sessions:

1:30- 3:30—Ward Rounds—
Orthopedics. Dr. R. V. Funsten.
Internal Medicine. Drs. J. C. Flippin and J. E. Wood.
Neurology and Psychiatry. Dr. D. C. Wilson.
Dermatology and Syphilology. Dr. D. C. Smith.
3:30- 4:30—Appendicitis in Children. Dr. W. H. Goodwin.
4:30- 4:40—Discussion.
4:30 —Round Table.

To provide more satisfactorily for the convenience of its guests, the University committee requests notices in advance from those who plan to attend. These notices should be sent to the chairman of the committee, Dr. L. T. Royster, University of Virginia Hospital, University, Va.

G. BASKERVILLE ZEHMER,
Executive Secretary.

Proceedings of Societies

Richmond Academy of Medicine.

The Section on the History of Medicine of the Academy had charge of the meeting on the evening of October 23rd. At this time, there was an exhibit of books, manuscripts, and pictures of Virginia doctors, from the 17th to the 20th century, shown in the Library rooms. Included in the exhibit which was open for the week was an interesting group of books on medical botany; books by noted teachers of medicine including what is believed to be a complete collection of the works of Robley Dunglison, first professor of medicine at the University of Virginia; a collection of medical journals published in Virginia; and a number of theses of Virginia students of medicine at Edinburgh and the University of Pennsylvania. In addition to the books owned by the Academy, books were loaned by the Army Medical Library of Washington, the State Library and the Medical College of Virginia. The guests of honor were entertained at dinner in the Academy Building by the doctors who are members of this special section and the wives of these doctors were also invited. The regular meeting, at 8:30 P. M., included papers by Dr. Wyndham B. Blanton, Richmond, on Mad Stones in Virginia; Dr. Hugh H. Trout, Roanoke, Va., on A Few Instances in the Early Life of Ephraim McDowell; and Dr. Stewart R. Roberts, Atlanta, Ga., on The Medical Aspects of the Andersonville Prison. Following this program an informal buffet supper was served all members and visitors.

The Southwestern Virginia Medical Society

Held its semi-annual meeting in Radford, Va., September 21st, with an attendance of fifty-five. The meeting was opened with a luncheon at St

Alban's Sanatorium with the members as guests of Drs. J. C. and James P. King. Interesting papers were presented at the scientific meeting by Drs. P. D. Stout, Bristol; Thos. N. Spessard, Roanoke; Wm. K. Lloyd, A. M. Showalter and J. A. Davis, Jr. Christiansburg; W. W. S. Butler, Jr., and Littleton Davis, Roanoke; and Booker Lee, Pulaski.

At the business session, several new members were elected and the following officers were chosen for the coming year: President, Dr. Beverley F. Eckles, Galax; vice-president, Dr. W. R. Whitman, Roanoke; and secretary-treasurer, Dr. H. W. Bachman (re-elected), Bristol. The following were elected to membership: Dr. J. Stuart Staley, Marion: Dr. F. T. Hauser, Bland; Dr. Douglas D. Vance, Bristol; Dr. Philip D. Stout, Bristol; and Dr. S. J. Beeken, Cambria.

The evening session was a banquet at the American Legion Hall, and at this time, Dr. E. M. Chitwood, Wytheville, gave his presidential address on Infections of the Blood Stream. The next meeting will be held in March, 1935, the exact date and place to be named.

The Lynchburg Academy of Medicine

Held its opening Fall meeting on October the 1st, at which time Dr. E. G. Scott presented a paper on Von Gierke's Disease and Dr. H. B. Spencer spoke on X-Ray Therapy. Dr. W. O. Smith, Alta Vista, a former member, was re-elected to membership and Dr. Homer E. Clark, Massies Mill, and Dr. Walter L. Williams, Brookneal, were elected members.

Dr. R. D. Caldwell and Dr. John Hundley, Jr., are president and secretary, respectively.

The Clinch Valley Medical Society

Had its semi-annual meeting at Norton, Va., September 29th, with a luncheon at Hotel Norton between the business and scientific sessions. Dr. J. M. Dougherty, Sr., Nickelsville, president, presided. The following officers were elected for the ensuing year: President, Dr. W. R. Williams, Richlands; vice-presidents, Dr. George W. Botts, Norton, and Dr. W. C. Elliott, Lebanon. Dr. C. B. Bowyer, Stonega, who has been secretary-treasurer since the organization of this Society, was re-elected to this office

At the afternoon session, interesting and instructive papers were presented by the following guests: Dr. William B. Porter and Dr. I. A. Bigger, of the Medical College of Virginia, Dr. I. C. Riggin, State Health Commissioner, and Dr. William Tate Graham, of the McGuire Clinic, all of Richmond.

The Medical Association of the Valley of Virginia

Met in Staunton, Va., September 27th, under the presidency of Dr. E. C. Stuart, of Winchester. The invited guest on this occasion was Dr. F. B. Stafford, Sanatorium, Va., who gave an illustrated talk on Upper Respiratory Infections Simulating Tuberculosis. Several other interesting papers were presented also. The following officers were elected for the ensuing year: President, Dr. Kenneth Bradford, Staunton; vice-presidents, Dr. J. B. McKee, Winchester, and Dr. S. P. Hileman, Millboro; treasurer, Dr. H. G. Middlekauff, Weyers Cave; secretary, Dr. Alex. F. Robertson, Jr., Staunton.

News Notes

The Alexandria Meeting of the Society

Is now a pleasant memory. We feel deeply grateful to the doctors of that city for the splendid work they did for the success of the sixty-fifth annual session of the Medical Society of Virginia. This meeting held under the presidency of Dr. R. D. Bates, of Newtown, was well attended, there being a registration of three hundred and fifty doctors, about one hundred ladies, and a number of visitors.

An excellent clinic was held on Tuesday afternoon by Dr. Thomas R. Boggs, of Baltimore. Dr. Harvey B. Stone, also of Baltimore, who was to have held a clinic in the afternoon and presented a paper in the evening, was prevented by illness from attending, but his paper was read by Dr. Frank S. Johns, of Richmond. Post-convention clinics were held in Washington on Thursday afternoon.

Several special associations held meetings during the time of the State meeting and these with the Medical College of Virginia Alumni dinner added

to the interest of the occasion. Following the Wednesday evening session, there was a reception at Gadsby's Tavern, one of the old landmarks of the city, for all members of the Society and Auxiliary and visitors. This building has a most valuable collection of antique furniture and those who attended the reception spent a most pleasant evening.

Dr. F. H. Smith, Abingdon, succeeded to the presidency; Dr. P. St. L. Moncure, Norfolk, was named president-elect, and Dr. Carrington Williams, Richmond, Dr. S. B. Moore, Alexandria, and Dr. Alex. F. Robertson, Jr., Staunton, vice-presidents. Councilors chosen for the even numbered districts are 2nd, Dr. Julian L. Rawls, Norfolk; 4th, Dr. Wright Clarkson, Petersburg; 6th, Dr. W. L. Powell, Roanoke; 8th, Dr. J. E. Knight, Warrenton. Dr. C. O. Dearmont, White Post, was appointed councilor for the 7th District to fill the unexpired term of Dr. Percy Harris, who, in the redistricting of the State, was transferred to the 8th District.

The invitation of the Norfolk County Medical Society to hold the 1935 meeting in Norfolk was unanimously accepted.

The Virginia Orthopedic Association

Held its annual meeting in Alexandria, Va., at the time of the meeting of the State Society. Dr. W. T. Graham, Richmond, the president, presided. Usual routine matters and subjects of special interest to the orthopedic surgeons were discussed. Dr. Robert V. Funsten, University, was elected president for the coming year, and Dr. B. H. Kyle, Lynchburg, was re-elected secretary-treasurer.

The Virginia Pediatric Society

Held a luncheon meeting in Alexandria in October, during the meeting of the Medical Society of Virginia, Dr. Thomas D. Jones, of Richmond presiding. On this occasion, Dr. W. P. McDowell, Norfolk, was elected president; Dr. Lee E. Sutton, Richmond, vice-president; and Dr. W. Ambrose McGee, Richmond, was re-elected secretary-treasurer.

The Virginia Urologic Society

Was formed by the urological surgeons attending the recent meeting of the Medical Society of Virginia in Alexandria. Dr. John H. Neff, University, was elected president; Dr. J. F. Geisinger, Richmond, vice-president; and Dr. L. D. Keyser, Roanoke, secretary-treasurer. Plans for the future work of this society will be worked out by the officers.

Married.

Dr. Berkeley Hancock Martin and Miss Elizabeth Sydnor McCraw, both of Richmond, Va., September 29th.

Dr. Thomas Blackburn Payne, Fredericksburg, Va., and Miss Virginia Garnett, Gwynedd, Pa., October 20th. Dr. Payne is the son of Dr. and Mrs. Rozbert J. Payne, of Fredericksburg, Va., and is an alumnus of the Medical College of Virginia, class of '31.

Dr. Thomas Edgar Painter, class of '31, Medical College of Virginia, who later interned at Memorial Hospital, Richmond, and Miss Frances Angelina Curtis, Liberty, N. C., October 15th. They will make their home in Williamsburg, Va.

Dr. Fred M. Hodges,

Prominent X-ray specialist of Richmond, Va., was honored by the American Roentgen Ray Society, at its meeting held recently in Pittsburgh, when he was elected president for the coming year. This is the largest organization in this specialty in the world and includes members from all parts of the United States and Canada.

Radiologs.

The Second Series of Radiologs, consisting of twenty selected Radio Talks on Preventive Medicine, has just been published by the State Health Department upon request of the State Department of Education. These talks were given by Dr. W. A. Plecker, State Registrar of Vital Statistics, from WRVA studio in Richmond, Va., and are written in popular style, illustrated by actual occurrences, and are readable and instructive. They have been prepared with special reference to their use in the high schools of Virginia. Owing to the cost of publication, they will be mailed only upon request sent Dr. W. A. Plecker, State Office Building, Richmond, Va.

Dr. John C. McCluer,

Class of '32, University of Virginia, who interned at De Paul Hospital, St. Louis, Mo., and was later resident physician in Camden-Clark Memorial Hospital, Parkersburg, W. Va., has located at 214 North Columbus Street, Alexandria, Va., and is engaged in general practice.

Southern Medical Association.

To those who have attended the annual meetings of the Southern Medical Association, it is sufficient to say that it is to meet in San Antonio, Texas, November 13th-16th, under the presidency of Dr. Hugh Leslie Moore, of Dallas, Texas. Both vice-presidents this year are from this section—Dr. Fred M. Hodges, Richmond, Va., and Dr. Thomas A. Groover, Washington, D. C. There are a number of good hotels in San Antonio and all who attend may be assured of comfortable accommodations. The general sessions, sixteen scientific sessions, eight organizations meeting conjointly and social activities will furnish something of interest for every one. If the advertisement appearing in this issue of the MONTHLY does not give all information desired, write at once to Mr. C. P. Loranz, secretary-manager, Empire Building, Birmingham, Ala.

Dr. Henry B. Showalter,

Who recently completed a residency at George Ben Johnston Memorial Hospital, Abingdon, Va., has located for general practice at Kenbridge, Va., Dr. Showalter is a member of the class of '33, Medical College of Virginia.

Dr. Nelson Mercer,

Richmond, Va., who has the rank of lieutenant colonel in the Medical Corps, Virginia National Guard, was designated by Adjutant General Waller to attend the annual meeting of the Association of Military Surgeons in October, at the Medical Field Service School, Carlisle Barracks, Pa.

Lilly Research Laboratories Formally Opened.

More than a thousand investigators and research workers were present at the formal opening of the new Lilly Research Laboratories, at Indianapolis, on October 11th. The gathering of distinguished visitors, representing many noted bodies and famous institutions in this and foreign countries, assembled in a mammoth tent erected for the occasion adjacent to the Lilly Laboratories.

At the formal opening exercises, in the afternoon, Eli Lilly, head of the Lilly organization, presided as chairman. Mr. J. K. Lilly, chairman of the board of directors, responded briefly on "Research in Manufacturing Pharmacy" from the time of his entrance in the organization in 1876 up to the present.

Following Mr. Lilly's remarks, Dr. Irving Langmuir, director of research for the General Electric Company, discussed "The Unpredictable Results of Research."

Sir Frederick Banting then talked on "The Early History of Insulin." He gave an account of the early experiments conducted by Dr. Best and himself which first demonstrated the existence of Insulin, and expressed his great appreciation of the cooperation which he and his associates had received from the staff of the Lilly Research Laboratories in the development of a practical, large-scale procedure for the production of Insulin.

Sir Henry Dale, director of the National Institute for Medical Research, London, and secretary of the Royal Society, was the last speaker on the afternoon program, his topic being "Chemical Ideas in Medicine and Biology." Sir Henry spoke of the immediate objectives of research in such laboratories as those of Eli Lilly and Company, and of their natural and proper differences from those of the laboratories supported by academic or public endowment.

The afternoon speaking program was followed by an inspection of the new laboratories, the party being divided into small groups in the charge of guides. In the evening a banquet was tendered the out-of-town guests.

The Norfolk & Western Railway Surgeons' Association

Held its eighteenth meeting in Atlantic City, September 26th and 27th, with approximately 150 members present. The president, Dr. M. J. Payne, Staunton, Va., gave an address on Some Newer Aspects of Industrial Surgery. Other Virginians among the speakers were: Dr. W. R. Whitman, chief surgeon of the railway, Dr. M. A. Johnson, Assistant chief surgeon, Dr. J. T. McKinney and Dr. H. B. Stone, all of Roanoke; Dr. A. A. Burke, Norfolk; and Dr. Charles D. Townes, Waverly. New officers elected at this time are: President, Dr. A. de T. Valk, Winston-Salem, N. C.; vice-presidents, Dr. W. H. Teachnor, Columbus, Ohio, and Dr. G. B. Irvine, Williamson, W. Va. Dr. T. D. Armistead, Roanoke, Va., was re-elected secretary. The place and date of next meeting will be named later.

Dr. J. G. Lyerly,

For some time of Richmond, Va., located in Jacksonville, Fla., October 1st, with offices in Suite 405,

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Medical Arts Building. His practice will be limited to neurological surgery.

Medical College of Virginia News

The regular scientific monthly meeting of the staff was held October 18th. The program was as follows:

Chronic Subdural Hematoma, by Dr. W. G. Crutchfield.

Recent Developments in the Chemistry of Vitamines, by Dr. J. C. Forbes.

Some New Observations on the Relation of Alveolar Carbon Dioxide, Two Alkaline Reserves and pH of the Blood, by Dr. Frank Apperly.

Dr. J. C. Forbes, associate professor of chemistry, Dr. W. G. Crockett, professor of pharmacy, Dr. Harvey B. Haag, professor of pharmacology, and Mr. A. L. I. Winne, secretary of the State Board of Pharmacy, attended the dedication of the new Lilly Research Laboratories in Indianapolis, Ind., October 11th.

Among the faculty members attending the sixty-fifth annual session of the Medical Society of Virginia, held at Alexandria, October 9th-10th-11th, were President W. T. Sanger, Dean Lee E. Sutton, Jr., Dr. W. B. Porter, professor of medicine, Dr. Harry Walker, associate in medicine, Dr. J. Morrison Hutcheson, professor of clinical medicine, Dr. Beverley R. Tucker, professor of nervous and mental diseases, Dr. Dewey Davis, assistant professor of medicine, Dr. Oscar L. Hite, instructor in medicine, Dr. Harvey B. Haag, professor of pharmacology, Dr. D. G. Chapman, instructor in medicine, Dr. Kinloch Nelson, associate in medicine, Dr. Carrington Williams, associate professor of medicine, Dr. Charles R. Robins, professor of gynecology. Dr. C. C. Coleman, professor of neurological surgery, Dr. W. G. Crutchfield, assistant professor of neurological surgery, Dr. Guy Horsley, instructor in surgery, Dr. H. J. Warthen, assistant professor of surgery, Dr. H. P. Mauck, associate in orthopedic surgery, Dr. Howard R. Masters, associate in nervous and mental diseases, Dr. James P. Baker, instructor in medicine, Dr. William H. Higgins, professor of clinical medicine, Dr. H. H. Ware, Jr., associate professor of obstetrics, and Dr. Greer Baughman, professor of obstetrics. Many of these physicians took part in the program.

President W. T. Sanger and Dean Lee E. Sutton, Jr., will attend the anual meeting of the Association of American Medical Colleges to be held in Nashville, Tenn., October 29th-30th-31st.

During the month of September the outpatient department of the college handled 2,504 patients, making 5,086 patient visits to the various clinics.

Many members of the faculty attended the lecture by Dr. Henry C. Sherman, Mitchell Professor of Chemistry at Columbia University, which was given under the auspices of the Virginia Section, American Chemical Society, October 12th.

Jefferson Medical College.

The 110th annual session of the Jefferson Medical College was inaugurated on the evening of September 24th, at eight o'clock.

Mr. Alba B. Johnson, President of the Board of Trustees, presided. The Introductory Lecture was delivered by Dr. Thomas C. Stellwagen, Professor of Genito-Urinary Surgery, on "Cooperation and Loyalty."

Dr. Ross V. Patterson, Dean, welcomed the 562 members of the student body. The new students consisted of 148 Freshmen and sixteen Juniors.

The members of the First-Year Class were prepared for medical study in sixty-two different institutions and all have received collegiate degrees. There were 550 applicants for admission to the First-Year Class who submitted formal certificates of preliminary education. Approximately 260 applicants with college degrees were declined admission.

Among the members of the Class are sons of seven Jefferson graduates, together with six other relatives of Jefferson graduates. There are seven other sons of physicians, not graduates of Jefferson Medical College.

Geographically, eighteen different States and Insular Possessions are represented, as follows: Maine, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, West Virginia, Ohio, North Carolina, Massachusetts, Georgia, Kansas, Wyoming, Tennessee, Utah, Hawaii, Puerto Rico.

News from Duke University School of Medicine and Duke Hospital.

On October 1st the Duke University School of Medicine and the School of Nursing began their autumn quarters, with a total of one hundred and

ninety-four students in the School of Medicine, and a total of seventy in the School of Nursing.

On October 12th and 13th a postgraduate course in Fractures was held at Duke Hospital by Dr. Alfred R. Shands, Jr. Lectures and demonstrations were given by the following: Dr. Philip D. Wilson, New York City, Dr. William M. Roberts, Gastonia, N. C., Dr. Oscar L. Miller, Charlotte, N. C., Dr. H. Earl Conwell, Fairfield, Ala., Dr. F. A. Hoshall, Charleston, S. C., Dr. J. Warren White, Greenville, S. C., Dr. J. T. Saunders, Asheville, N. C., Dr. Hugh Thompson, Raleigh, N. C., Dr. G. W. Leadbetter, Washington, D. C., Dr. Raymond S. Crispell, Duke Hospital, and Dr Walter F. Cole, Greensboro, N. C. In addition, many fractures, braces and splints were exhibited. Over three hundred physicians from North and South Carolina and Virginia attended. It is probable, on account of the interest shown, that this may be made an annual affair.

Dr. C. C. Cooley,

An alumnus of the University of Virginia, class of '29, has just completed a course at the Postgraduate Hospital in New York City, and has located in Norfolk, Va., for practice in diseases of the eye, ear, nose and throat. He is associated with Dr. A. A. Burke.

Dr. Frank P. Coleman,

Recently engaged in general practice at Stuarts Draft, Va., is taking a course in general surgery at the University of Michigan Hospital in Ann Arbor.

Dr. Ernest L. Stebbins,

Who has been director of the health department of Henrico County, for some time, has tendered his resignation to accept the position of epidemiologist with the New York State Department of Health, at Albany. He will enter upon his new duties on December the 1st.

Seaboard Medical Association of Virginia and North Carolina.

As the annual meeting of this Association is so early in December—the 4th, 5th and 6th—we are again announcing it that those who plan to attend may arrange their work accordingly. The program includes papers by several invited guests as well as by members. The meeting is to be in Kinston, N. C., this year, under the presidency of Dr. Paul F. Whitaker, of that place. Dr. Clarence Porter Jones, secretary, Newport News, Va., will be glad to give any information desired about the meeting.

The Ex-Interns' Association of St. Elizabeth's Hospital,

Richmond, Va., held its eleventh annual meeting at the hospital on October 2nd, under the presidency of Dr. A. I. Dodson, of Richmond. Clinics in the morning were followed by luncheon at Westmoreland Club. The afternoon session included an address by the president and papers by Dr. M. L. Breitstein, Baltimore; Dr. Paul C. Colonna, New York; Dr. Wright Clarkson, Petersburg, Va., and Dr. Paul T. McBee, Bakersville, N. C.

At the business session following the scientific program, Dr. H. J. Warthen, Jr., was eleceted president; Dr. Guy W. Horsley, vice-president; and Dr. John S. Horsley, Jr., was re-elected secretary-treasurer. All are of Richmond. The members then adjourned to the home of Dr. and Mrs. J. Shelton Horsley where they were entertained at supper.

Dr. Beverley R. Tucker,

Richmond, Va., by invitation presented a paper before the Florida East Coast Medical Association, at its meeting in Orlando, the middle of October.

Death Rates by Occupations.

Miss Jessamine Whitney, Statistician of the National Tuberculosis Association, has brought out some interesting figures in regard to this subject, in a report of a five-year study conducted under her supervision and recently made public. It was found that the highest death rate from all causes for working men between 15 and 64 years of age, was among hostlers and stable hands, being 36.22 deaths per 1,000 employed. The rate for garage laborers of the same ages was only 6.65. On the other hand, school teachers had a rate of only 4.42, and college presidents and professors fared better still with a rate of 2.69. Lawyers, judges and justices had a rate of 7.89, clergymen 10.33, and physicians and surgeons 10.69. After the age of 45, heart disease claims more than the average of professional men, but the rate for agricultural workers is only half the average. Tuberculosis and heart disease take their greatest toll among unskilled workers. Suicides among lawyers, judges, and justices are less than the average for all gainfully em-

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ployed males included in the study, but suicides are greater among doctors.

Dr. W. C. Brann,

South Boston, Va., has been appointed by the President of the Lion's Club of that place, as a member of the committee on work for the blind for the coming year.

Venereal Disease Information

Is a monthly publication of the Public Health Service and is published in a form to make it easily readable for the busy physician. It is primarily an abstract journal containing summaries of articles on the venereal diseases which appear in 350 of the medical journals of the world. The price is only fifty cents a year, payable by check, money order, or cash (not stamps), to the Superintendent of Documents, Government Printing Office, Washington, D. C. This magazine provides an easy method for keeping abreast of modern advance in veneral disease work.

Dr. H. Cantor,

Petersburg, Va., attended the seventh annual graduate fortnight of the New York Academy of Medicine on diseases of the gastro-intestinal tract.

Dr. W. E. Croxton,

West Point, Va., has been elected president of the West Point Kiwanis Club for the coming year.

Dr. Walter A. Porter,

Class of '32, Medical College of Virginia, after two years' hospital work at Lewis Gale Hospital, Roanoke, Va., has located at Hillsville, Va., for the private practice of medicine and minor surgery. He is associated with Dr. C. B. Nuckolls of that place. Dr. Porter was married last summer to Miss Virginia McMillan, of Kernersville, N. C.

Dr. O. N. Shelton,

Who has been a member of the staff of Blue Ridge Sanatorium for several years, has located at Orange, Va., where he is engaged in general practice.

Dr. James Peery Williams,

Of the Mattie Williams Hospital, Richlands, Va., spent the month of October at the Mayo Clinic, Rochester, Minn., for special study.

The Rockefeller Foundation.

In a report of the activities of the Foundation for 1933, the following points are noted:

The sum of $3,286,063.01 was expended for public health work during the year. Laboratories for yellow fever were supported in Lagos, Nigeria; Bahia, Brazil, and New York City; aided three states in the United States and seventeen foreign governments in anti-malaria work; gave assistance to the central health administrations of fourteen states in the United States and to the local health administrations of twenty-three states, four provinces in Canada, and five areas in Mexico; and provided funds for local health units in fourteen other countries; etc.

In the medical sciences, The Rockefeller Foundation, during 1933, appropriated $1,173,853.00, and in the natural sciences the appropriations amounted to $807,250.00. During the year, the Foundation, provided 295 fellowships in the medical sciences and granted sums which enabled sixty-one scientists or groups of scientists to carry on research work. The total number of fellowships in the natural sciences was eighty-nine.

The toal amount expended by the Fund in 1933 for various philanthropic projects was $9,890,806.31.

Dr. Charles P. Cake,

An alumnus of the University of Virginia, who recently located in Washington, D. C., has been appointed an instructor in clinical medicine in the Georgetown University Medical School and chief of the Tuberculosis Division of Gallinger Municipal Hospital.

Dr. C. T. Pierce,

Nuttsville, Va., was elected vice-chairman of the Lancaster County Farm Debt Adjustment committee, recently appointed by Governor Peery.

Chinese Start Work on Huge Medical Center.

Work has been started in Shanghai, China, on the construction of a medical center. The land on which the center is being built was purchased by the Rockefeller Foundation nearly twenty years ago for the purpose of erecting a medical center. The Foundation has turned the land over to the board of directors of the Shanghai medical center without cost. The new medical center will include a hospital and medical college and will be patterned after similar institutions in New York and London. The hospital will have accommodations for 550 beds and as extensions are added the capacity will be increased to 1,000. It will be the aim of the hospital to serve mainly the middle class people of the Chinese community in Shanghai. The college

buildings will also house the national medical school which is now located in another part of Shanghai.

Dr. James A. Gooch,

An alumnus of the Medical College of Virginia in the class of '31, has located for general practice in Alexandria, Va., with offices at 121 South St. Asaph Street. Dr. Gooch served his internship at the State Hospital, Hazleton, Pa., and then had a two year residency at the State Sanatorium, Cresson, Pa.

Dr. George H. Reese

Has been elected president of the Petersburg (Va.) Kiwanis Club for the coming year.

Dr. W. R. Bond,

Professor of Physiology at the Medical College of Virginia, Richmond, has secured a leave of absence from the College to accept the position of Director of Medical Research with the Pyridium Corporation, a subsidiary of Merck and Company. Dr. Bond expects to enter upon his new work about the middle of November.

Dr. W. Banks Huff,

Roanoke, Va., attended Surgical Clinics at the Mayo Clinic, Rochester, Minn., the latter part of August and first part of September.

Dr. Herbert D. Wolff, Jr.,

Has located in Alexandria, Va., with offices in Doniphan Building. His work is limited to urology.

Dr. Wolff graduated from the University of Virginia in 1929 and was for some time a resident physician at the University Hospital and instructor in urology in the Department of Medicine.

Dr. Henry C. Spalding,

Of the class of '31, Medical College of Virginia, and last year a resident physician in the Medical College of Virginia, Hospital Division, has located in Richmond, Va., for the practice of obstetrics and gynecology. His offices are in the Professional Building.

Dr. E. G. Gill,

Roanoke, Va., by invitation, gave an illustrated talk before the Eye, Ear, Nose and Throat Section of the Norfolk County Medical Society on October 29th, his subject being The Management of Blood Stream Infection.

Books Available to Members of Medical Society of Virginia.

The following are some of the new books in the Library of the Medical College of Virginia, Richmond, which may be borrowed by any member of the Medical Society of Virginia, the only charge being return postage:

Arny—Principles of Pharmacy. 3rd ed.
Beard—On Understanding Women.
Bigelow—Sex Education.
Bray, G. W.—Recent Advances in Allergy.
Brinkley—Principles of General Chemistry.
Burrows, Harold—Some Factors in the Localization of Disease in the Body.
Cabot, R. C.—Physical Diagnosis. 11th ed.
Calvet, J.—L'epiphyse.
Chapin, Chas. V.—Papers of Charles V. Chapin, M. D.
Coker & Totten—Trees of South Eastern States.
Conklin, E. G.—Heredity and Environment in the Development of Man.
Cushing, H.—Consecratio Medici and Other Papers.
Cushny—Secretion of the Urine.
Daukes, S. H.—Medical Museum.
Dautrebande, L.—Les gaz toxiques.
De Schweinitz—Growing Up.
Dickinson & Beam—The Single Woman.
Dodson, A. I.—Synopsis of Genito-Urinary Diseases.
Gervais—Medicine Man in China.
Gibson, A. G.—The Physician's Art.
Goodman, N. G.—Benjamin Rush, Physician and Citizen, 1746-1813.
Greenman & Duhring—Breeding and Care of the Albino Rat for Research Purposes.
Grinker, R. R.—Neurology.
Gutman, J.—Modern Drug Encyclopedia.
Jackson, C.—Foreign Body in Air and Food Passages Roentgenologically Considered.
Jordan, H. E.—Textbook of Histology.
Knopf—The Art of Being a Woman.
Knopf, S. A.—Various Aspects of Birth Control.
Luckiesh, M.—Seeing and Human Welfare.
Ogden, C. K.—System of Basic English.
Osler, Wm.—Concise History of Medicine.
Osler, Wm.—Science and Immortality.
Pearl, R.—Constitution and Health.
Pitkin, W. B.—New Careers for Youth.
Remington—Practice of Pharmacy. 7th ed.
Reynolds, N.—Relief of Pain in Child-Birth.
Richards—Behaviour Aspects of Child Conduct.
Sabin, F. R.—Franklin Paine Mall, the story of a mind.
Scoville—The Art of Compounding.
Sharp, L. W.—Introduction to Cytology. 3rd ed.
Smith, T.—Parasitism and Disease.
Stopford, J. S. B.—Sensation and the Sensory Pathway.
Who's Who in America, 1934-1935.
Wiggers, C. J.—Physiology in Health and Disease.
Williams, G.—Minor Surgery and Bandaging.
Williams, J. W.—Obstetrics. 6th ed.

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Obituary Record

Dr. William Francis Drewry,

Widely known psychiatrist, died at his home in Richmond, Va., October 19, 1934, after an illness of several months. He was a native of Southampton County, Va., and was 74 years of age. Dr. Drewry received his medical degree from the Medical College of Virginia in 1884. At the time of his death, he was director of the Bureau of Mental Hygiene of the State Department of Public Welfare where he had served since 1929. Previous to that, Dr. Drewry had been superintendent of the Central State Hospital, Petersburg, for thirty years and had also served as city manager of Petersburg. Dr. Drewry had been a member of the Medical Society of Virginia for forty-eight years and was its president in 1907-8. He had served on numerous committees of the Society and was ever active in its interests. He was an associate editor of the VIRGINIA MEDICAL MONTHLY from 1911 through 1917, when there was a change in the policy of the journal, and frequently contributed to its editorial pages. He was always foremost in any work he undertook. He was one of the leaders in the movement for the establishment in Virginia of a colony for feebleminded and epileptics and was a member of the epileptic commission. He was one of the organizers of the state conference on social work and of the State Tuberculosis Association, having served as president of the latter in 1928. Among the different organizations which Dr. Drewry had served as president are the American Medico-Psychological Association, American Psychiatric Association, the National Association for the Study of Epilepsy and Care of Epileptics, and the Virginia conference on social work. He is the only Virginian who has served as president of the American Psychiatric Association. He was a member of the Sigma Chi and Phi Beta Kappa fraternities.

Dr. Drewry is survived by his wife and four children. The burial in Petersburg was largely attended by members of the medical profession, State officials and other friends.

Dr. Wilson A. Koontz,

Shenandoah, Va., died October 13, 1934, following an illness of several years. He was 84 years of age and graduated from the College of Physicians and Surgeons of Baltimore in 1876. Dr. Koontz had been practicing in Page County for fifty-seven years, and had been a member of the Medical Society of Virginia for twenty-four years. Six children survive him.

Dr. Charles Hopkins Rolston,

Prominent physician of Mt. Clinton, Va., died September 26th, after a long illness caused by injuries received in an automobile accident two years ago. He would have been 74 years old on the day after his death. Dr. Rolston graduated from the University of Virginia, Department of Medicine, in 1884. He served eight years in the Virginia House of Delegates, representing Rockingham County. Dr. Rolston is survived by his wife and five children.

Dr. Abram Barnes Hooe,

Washington, D. C., died September 19th in the Walter Reed General Hospital, after an illness of some months. He was 63 years of age and graduated in medicine from Columbian University Medical Department, Washington, in 1896. He was a member of his local medical society, the American College of Surgeons and was formerly a member of the Medical Society of Virginia.

Dr. Clarence Ruter Dufour,

Washington, D. C., for a number of years an associate member of the Medical Society of Virginia, died on September 11th, aged 71 years. He was graduated in medicine from Georgetown University School of Medicine in 1890 and was formerly emeritus professor of clinical ophthalmology at that school.

Dr. William Minor Bryan

Died at his country home "Indian Run" near Charlottesville, Va., October 5th, following a heart attack. He was a graduate of the University of Virginia, Department of Medicine, class of '06, and was 52 years of age. Dr. Bryan was a retired Senior Surgeon in the U. S. Public Health Service. His wife and two children survive him.

For Sale—

Equipment of doctor recently deceased. May be seen in the Surgical Show Rooms at 308 N. 12th Street (between Broad and Marshall), Richmond, Va. ***(Adv.)***